DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER BUREAU
SUPPLYING WATER TO THE PUBLIC

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of the Michigan Administrative Code are amended as follows:

PART 1. GENERAL PROVISIONS

R 325.10102 Definitions; A, B.

Rule 102. As used in these rules:

(a) "Act" means 1976 PA 399, MCL 325.1001 et seq. and known as the safe drinking water act.

(b) "Action level" means the concentration of lead or copper in water as specified in R 325.10604f(1)(c) that determines, in some cases, the treatment requirements that a water ~~system~~ **supply** is required to complete.

(c) "Advisory board" means the advisory board of examiners appointed by the director under section 9(2) of the act.

(d) "Alteration" means the modification of, or addition to, an existing waterworks system, or portion of the system, that affects any of the following:

(i) Flow.

(ii) Capacity.

(iii) System service area.

(iv) Source.

(v) Treatment.

(vi) Reliability.

(e) "Approved analytical technique" means a calculation, determination, or other laboratory examination or procedure that has been approved by the United States environmental protection agency ~~pursuant to~~ **under** 40 C.F.R. part 141, which is adopted by reference in R 325.10605.

(f) "Approved basement" means a basement which has walls and a floor that are constructed of concrete or its equivalent, which is essentially watertight, which is effectively drained, and which is in daily use.

(g) "Aquifer" means an underground water-bearing formation which is saturated and which transmits water in sufficient quantities to serve as a water supply.

(h) "Artesian" means a condition of internal pressure which causes the water level in a well to rise above the aquifer used to supply water at the well location.

(i) "Back-up operator" means a certified operator designated by the public water supply to be in charge of the waterworks system or portion of the waterworks system when the operator in charge is not available.

(j) "Bag filters" means pressure-driven separation devices that remove particulate matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed of a non-rigid, fabric filtration media housed in a pressure vessel in which the direction of flow is from the inside of the bag to outside.

(k) "Bank filtration" means a water treatment process that uses a well to recover surface water that has naturally infiltrated into groundwater through a river bed or bank or banks. Infiltration is typically enhanced by the hydraulic gradient imposed by a nearby pumping water supply or other well or wells.

~~(j)~~ **(l)** "Bottled drinking water" means water that is ultimately sold, provided, or offered for human consumption in a closed container.

R 325.10103 Definitions; C.

Rule 103. As used in these rules:

(a) "C" in "CT calculation" means the residual disinfectant concentration measured in milligrams per liter in a representative sample of water.

(b) **"Cartridge filters" means pressure-driven separation devices that remove particulate matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed as rigid or semi-rigid, self-supporting filter elements housed in pressure vessels in which flow is from the outside of the cartridge to the inside.**

(c) "Casing" means a durable pipe that is placed in a well to prevent the soil from caving in and to seal off surface drainage or undesirable water, gases, contaminants, or other fluids and prevent them from entering the well and the aquifer supplying the well.

~~(c)~~ **(d)** "Casing vent" means an outlet at the upper terminal of a well casing which provides atmospheric pressure in the well and which allows the escape of gases when present.

~~(d)~~ **(e)** "Certificate" means a document that is issued by the department to a person who meets the qualification requirements for operating a waterworks system or a portion of the waterworks system.

~~(e)~~ **(f)** "Certified operator" means an operator who holds a certificate.

(g) "Combined distribution system" means the interconnected distribution system consisting of the distribution systems of wholesale supplies and of the consecutive supplies that receive finished water.

~~(f)~~ **(h)** "Community supply" or "community water supply" or "community water system" means a public water supply that provides year-round service to not fewer than 15 living units or that regularly provides year-round service to not fewer than 25 residents.

~~(g)~~ **(i)** "Complete treatment" means a series of processes, including disinfection and filtration, to treat surface water or ground water under the direct influence of surface water, or to treat ground water not under the direct influence of surface water that uses precipitative softening, to produce a finished water meeting state drinking water standards.

~~(h)~~ **(j)** "Compliance cycle" means the 9-year calendar year cycle during which public water ~~systems~~ **supplies** are required to monitor. Each compliance cycle consists of three 3-year compliance periods. The first calendar year cycle begins January 1, 1993, and ends December 31, 2001; the second begins January 1, 2002, and ends December 31, 2010; the third begins January 1, 2011, and ends December 31, 2019.

~~(i)~~ **(k)** "Compliance period" means a 3-year calendar year period within a compliance cycle. Each compliance cycle has three 3-year compliance periods. Within the first compliance cycle, the first compliance period runs from January 1, 1993, to December 31, 1995; the second from January 1, 1996, to December 31, 1998; the third from January 1, 1999, to December 31, 2001.

~~(j)~~ **(l)** "Comprehensive performance evaluation (CPE)" means a thorough review and analysis of a treatment plant's performance-based capabilities and associated administrative, operation, and maintenance practices. It is conducted to identify factors that may be adversely impacting a plant's capability to achieve compliance and emphasizes approaches that can be implemented without significant capital improvements. For purposes of compliance, the comprehensive performance evaluation shall consist of at least all of the following components:

(i) Assessment of plant performance.

(ii) Evaluation of major unit processes.

(iii) Identification and prioritization of performance limiting factors.

(iv) Assessment of the applicability of comprehensive technical assistance.

(v) Preparation of a CPE report.

~~(k)~~ **(m)** "Confluent growth" means a continuous bacterial growth that covers the entire filtration area of a membrane filter, or portion of a filtration area, in which bacterial colonies are not discrete.

(n) "Consecutive system" or "consecutive supply" means a public water supply that receives some or all of its finished water from one or more wholesale supplies. Delivery may be through a direct connection or through the distribution system of one or more consecutive supplies.

~~(l)~~ **(o)** "Construction" means the erection, installation, or alteration of a waterworks system, or any portion of a waterworks system, that affects any of the following:

(i) Flow.

(ii) Capacity.

(iii) System service area.

(iv) Source.

(v) Treatment.

(vi) Reliability.

~~(m)~~ **(p)** "Contested cases" means matters that are within the definition of a contested case as set forth by section 3(3) of 1969 PA 306, MCL 24.203(3), and matters of issue that involve any of the following which are issued by the director, the department, or the division ~~pursuant to~~ **under** the act and these rules:

(i) Orders.

(ii) Exemptions.

(iii) Variances.

(iv) Stipulations.

(v) Consent agreements.

(vi) Permits.

(vii) Licenses.

(viii) Certificates.

~~(n)~~ **(q)** "Contested case hearing" means a hearing that is initiated by the department or a person under chapters 4, 5, and 6 of 1969 PA 306, MCL 24.271 to 24.306.

~~(o)~~ **(r)** "Contaminant" means a physical, chemical, biological, or radiological substance or matter in water.

~~(p) "Contingency plan" means a plan for use by a supplier of water in the event of an emergency.~~

~~(q)~~ **(s)** "Conventional filtration" means a series of processes, including coagulation, flocculation, sedimentation, and filtration, resulting in substantial particulate removal.

~~(r)~~ **(t)** "Corrosion inhibitor" means a substance that is capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.

~~(s)~~ **(u)** "Cross connection" means a connection or arrangement of piping or appurtenances through which a backflow could occur.

~~(t)~~ **(v)** "CT calculation" means the product of residual disinfectant concentration (C) in milligrams per liter determined at or before the first customer and the corresponding disinfectant contact time (T) in minutes; C*T is calculated at rated capacity. The total CT shall be the sum of individual CTs of each disinfectant sequence.

~~(u)~~ **(w)** "Customer service connection" means the pipe between a water main and customer site piping or building plumbing system.

~~(v)~~ **(x)** "Customer site piping" means an underground piping system owned or controlled by the customer that conveys water from the customer service connection to building plumbing systems and other points of use on lands owned or controlled by the customer. Customer site piping does not include any system that incorporates treatment to protect public health.

R 325.10104 Definitions; D, E.

Rule 104. As used in these rules:

(a) "Department" means the department of environmental quality or its authorized agent or representative.

(b) "Deviation" means an exception to a department rule establishing minimum standards or requirements issued in writing or as a condition to a permit to a ~~supplier of water~~ **public water supply**.

(c) "Direct filtration" means a series of processes, including coagulation and filtration, but excluding sedimentation, resulting in substantial particulate removal.

(d) "Director" means the director of environmental quality or his or her authorized agent or representative.

(e) "Disinfectant contact time" (T in CT calculations) means the time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point at or before the point where residual disinfectant concentration is measured. Disinfectant contact time in pipelines shall be calculated based on plug flow by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipe. Disinfectant contact time within mixing basins and storage reservoirs shall be determined by tracer studies or an equivalent demonstration.

(f) "Disinfection profile" means a summary of Giardia lamblia **inactivation**, and in certain cases~~,~~ virus inactivation**,** through the treatment plant.

(g) "Distribution system" means a system that consists of the following components through which water is distributed and used or intended for use for drinking or household purposes:

(i) Piping.

(ii) Transmission or distribution mains.

(iii) Pumps.

(iv) Pumping stations.

(v) Storage tanks.

(vi) Controls.

(vii) Associated appurtenances.

(h) "Division" means the drinking water and radiological protection division of the department.

(i) "Domestic or other non-distribution system plumbing problem" means a coliform contamination problem in a public water ~~system~~ **supply** which has more than 1 service connection that is limited to the specific service connection from which the coliform positive sample was taken.

(j) "Drawdown" means the difference between the static water level and the pumping water level in a well or, for a flowing artesian well, the difference between an established datum above ground and the pumping water level.

(k) "Dual sample set" means a set of two samples collected at the same time and same location, with one sample analyzed for TTHM and the other sample analyzed for HAA5. Dual sample sets are collected for the purpose of conducting an IDSE under R 325.10719g and determining compliance with the TTHM and HAA5 MCLs under R 325.10610d and R 325.10719h to R 325.10719n.

(~~k~~**l**) "Effective corrosion inhibitor residual," for the purpose of lead and copper control, means a concentration that is sufficient to form a passivating film on the interior walls of a pipe.

(~~l~~**m**) "Emergency" means a situation in a public water supply that results in contamination, loss of pressure, lack of adequate supply of water, or other condition that poses an imminent hazard or danger to the public health.

(~~m~~**n**) "Enhanced coagulation" means the addition of sufficient coagulant for improved removal of disinfection byproduct precursors by conventional filtration treatment.

(~~n~~**o**) "Enhanced softening" means the improved removal of disinfection byproduct precursors by precipitative softening.

(~~o~~**p**) "EPA" means the United States environmental protection agency.

(~~p~~**q**) "Equivalent certificate" means a certificate which is issued to certain individuals. Individuals eligible for an equivalent certificate do not hold a current certificate but were issued certification before the effective date of the current rules.

(~~q~~**r**) "Established ground surface" means the intended or actual finished grade or elevation of the surface of the ground at the site of a water supply facility.

(~~r~~**s**) "Exemption" means an order, with appropriate conditions, time schedules, and compliance requirements, that is issued by the director to a ~~supplier of water~~ **public water supply** permitting a public water supply to be in temporary noncompliance with a state drinking water standard, including a specified treatment technique.

R 325.10105 Definitions; F to L.

Rule 105. As used in these rules:

(a) "Federal act" means the safe drinking water act of 1974, 42 U.S.C. S300f et seq. and the ~~provisions of~~ **state and local assistance set forth in** 40 C.F.R. part 35, §35.600 to §35.630; **national primary drinking water regulations set forth in** 40 C.F.R. part 141; and **national primary drinking water regulations implementation set forth in** 40 C.F.R. part 142 promulgated by EPA (~~1999~~**2008**) under the federal act.

(b) "Filter profile" means a graphical representation of individual filter performance, based on continuous turbidity measurements or total particle counts versus time for an entire filter run, from startup to backwash inclusively, that includes an assessment of filter performance while another filter is being backwashed.

(c) "Finished water" means water that is ~~ready for distribution to the customers or users of a public water supply.~~ **introduced into the distribution system of a public water supply and is intended for distribution and consumption without further treatment, except as treatment necessary to maintain water quality in the distribution system, for example, booster disinfection, addition of corrosion control chemicals.**

(d) "Firm capacity," as applied to wells, pumping stations, or units of treatment systems, means the production capability of each respective part of the waterworks system with the largest well, pump, or treatment unit out of service.

(e) "First draw sample" means a 1-liter sample of tap water which has been standing in plumbing pipes for not less than 6 hours and which is collected without flushing the tap.

(f) "Flowing stream" means a course of running water flowing in a definite channel.

~~(f)~~ **(g)** "GAC10" means granular activated carbon filter beds with an empty-bed contact time of 10 minutes based on average daily flow and a carbon reactivation frequency of every 180 days. **except that the reactivation frequency for GAC10 used as a best available technology for compliance with TTHM and HAA5 MCLs based on a locational annual average under R 325.10610 shall be 120 days.**

(h) GAC20 means granular activated carbon filter beds with an empty-bed contact time of 20 minutes based on average daily flow and a carbon reactivation frequency of every 240 days.

~~(g)~~ **(h)** "Gravity storage tank" means an elevated or ground level finished water storage reservoir that, during normal use, operates under atmospheric pressure.

~~(h)~~ **(i)** "Ground water" or "groundwater" means the water in the zone of saturation in which all of the pore spaces of the subsurface material are filled with water.

~~(i)~~ **(j)** "Ground water under the direct influence of surface water (GWUDI)" means any water beneath the surface of the ground with significant occurrence of insects or other

macroorganisms, algae, or large-diameter pathogens such as Giardia lamblia or Cryptosporidium, or significant and relatively rapid shifts in water characteristics, such as turbidity, temperature, conductivity, or pH, that closely correlate to climatological or surface water conditions. The department will determine direct influence for individual sources in accordance with this definition and R 325.10611(1) and will notify the ~~system~~ **supply** of its determination.

~~(j)~~ **(k)** "Grout" means neat cement, concrete, or other sealing material which is approved by the department and which is used to seal a well casing in a well.

~~(k)~~ **(l)** "Haloacetic acids (five) (HAA5)" mean the sum of the concentrations in milligrams per liter of the haloacetic acid compounds (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid), rounded to 2 significant figures after addition.

~~(l)~~ **(m)** "Imminent hazard" means that, in the judgment of the director, there is a violation, or a condition that may cause a violation, of the state drinking water standards at a public water supply requiring immediate action to prevent endangering the health of people.

~~(m)~~ **(n)** "Initial compliance period" means January 1993 to December 1995. For a ~~system~~ **supply** that has less than 150 service connections, the initial compliance period is January 1996 to December 1998 for contaminants listed in part 6 of these rules that have an effective date of January 17, 1994.

(o) "Lake/reservoir" means a natural or man made basin or hollow on the Earth's surface in which water collects or is stored that may or may not have a current or single direction of flow.

~~(n)~~ **(p)** "Large water supply" or "large water system," for the purpose of lead and copper control, means a public water supply that serves more than 50,000 persons.

~~(o)~~ **(q)** "Lead service line" means a service line which is made of lead and which connects the water main to the building inlet and any lead pigtail, gooseneck, or other fitting that is connected to the lead line.

~~(p)~~ **(r)** "License" means the license that is issued by the department to a water hauler, or for a water hauling tank, ~~pursuant to~~ **under** section 18 of the act.

~~(q)~~ **(s)** "Limited treatment system" means a treatment system, including, but not limited to, disinfection, fluoridation, iron removal, ion exchange treatment, phosphate application, or filtration other than complete treatment.

~~(r)~~ **(t)** "Living unit" means a house, apartment, or other domicile occupied or intended to be occupied on a day-to-day basis by an individual, family group, or equivalent.

(u) Locational running annual average (LRAA) is the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

R 325.10106 Definitions; M to O.

Rule 106. As used in these rules:

(a) "Maximum residual disinfectant level (MRDL)" means a level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects.

(b) "Maximum TTHM potential" means the maximum concentration of total trihalomethanes produced in a given water containing a disinfectant residual after 7 days at a temperature of 25 degrees Centigrade or above.

(c) "MCL" means the maximum permissible level of a contaminant in water that is delivered to any user of a public water supply.

(d) "MDL" means method detection limit for analytical work done to determine compliance with the act.

(e) "Medium-size water system" or "medium-size water supply," for the purpose of lead and copper control, means a public water supply that serves more than 3,300 persons and fewer than or equal to 50,000 persons.

(f) "Membrane filtration" means ~~any filtration process using tubular or spiral wound elements that exhibits the ability to mechanically separate water from other ions and solids by creating a pressure differential and flow across a membrane with an absolute pore size of less than 1 micron~~ **a pressure or vacuum driven separation process in which particulate matter larger than 1 micrometer is rejected by an engineered barrier, primarily through a size-exclusion mechanism, and which has a measurable removal efficiency of a target organism that can be verified through the application of a direct integrity test. This definition includes the common membrane technologies of microfiltration, ultrafiltration, nanofiltration, and reverse osmosis**.

(g) "Monitoring requirement" means a schedule, frequency, and location for the sampling and analysis of water that is required by the provisions of part 7 of these rules to determine whether a public water supply is in compliance with the state drinking water standards.

(h) "Near the first service connection" means at 1 of the 20% of all service connections in the entire system that are nearest the water supply treatment facility, as measured by water transport time within the distribution system.

(i) "Noncommunity supply" or "noncommunity water supply" or "noncommunity water system" means a public water supply that is not a community supply, but that has not fewer than 15 service connections or that serves not fewer than 25 individuals on an average daily basis for not less than 60 days per year.

(j) "Nontransient noncommunity water supply" or "nontransient noncommunity water system" or "NTNC" means a noncommunity supply that serves not fewer than 25 of the same individuals on an average daily basis more than 6 months per year. This definition includes public water supplies in places of employment, schools, ~~and~~ day-care centers **and bottlers of water**.

(k) "NTU" means nephelometric turbidity unit.

(l) "One hundred-year drought elevation" means the minimum projected water surface elevation that would occur at a location once in a period of 100 years.

(m) "One hundred-year flood elevation" means the maximum projected water surface elevation that would occur at a location once in a period of 100 years.

(n) "Operating shift" means that period of time during which operator decisions that affect public health are necessary for proper operation of the waterworks system.

(o) "Operator" means an individual who operates a waterworks system or a portion of a waterworks system.

(p) "Operator in charge" means a certified operator who is designated by the owner of a public water supply as the responsible individual in overall charge of a waterworks system, or portion of a waterworks system, who makes decisions regarding the daily operational activities of the system that will directly impact the quality or quantity of drinking water.

(q) "Optimal corrosion control treatment," for the purpose of lead and copper control, means the corrosion control treatment that minimizes the lead and copper concentrations at users' taps while ensuring that the treatment does not cause the public water supply to be in violation of any national primary drinking water regulations.

R 325.10107 Definitions; P, R.

Rule 107. As used in these rules:

(a) "Permit" means a public water supply construction permit that is issued to a supplier of water by the department under ~~the provisions of~~ section 4 of the act.

(b) "Person" means an individual, partnership, copartnership, cooperative, firm, company, public or private association or corporation, political subdivision, agency of the state, agency

of the federal government, trust, estate, joint structure company, or any other legal entity, or their legal representative, agent, or assignee.

(c) "Pitless adapter" means a device or assembly of parts which permits water to pass through the wall of a well casing or extension of a well casing and which provides access to the well and to the parts of the system within the well in a manner that prevents the entrance of contaminants into the well and the water produced.

(d) "Plans and specifications" means drawings, data, and a true description or representation of an entire waterworks system or parts of the system as it exists or is to be constructed, and a statement of how a waterworks system shall be operated.

(e) **"Plant intake" means the works or structures at the head of a conduit through which water is diverted from a source, for example, river or lake, into the treatment plant.**

(f) "Point-of-entry treatment device (POE)" means a treatment device applied to the drinking water entering a house or building for the purpose of reducing contaminants in the drinking water distributed throughout the house or building.

~~(f)~~ **(g)** "Point-of-use treatment devise (POU)" means a treatment device applied to a single tap used for the purpose of reducing contaminants in drinking water at that 1 tap.

~~(g)~~ **(h)** "Political subdivision" means a city, village, township, charter township, county, district, authority, or portion or combination of any of the entities specified in this subdivision.

~~(h)~~ **(i)** "PQL" means the practical quantitation levels. The PQL is the lowest concentration that can be reliably achieved by well-operated laboratories within specified limits of precision and accuracy during routine laboratory operating conditions.

(j) "Presedimentation" means a preliminary treatment process used to remove gravel, sand and other particulate material from the source water through settling before the water enters the primary clarification and filtration processes in a treatment plant.

~~(i)~~ **(k)** "Production well" means a well that has been approved for use for a public water supply in accordance with the provisions of part 8 of these rules.

~~(j)~~ **(l)** "Public hearing" means a hearing which is conducted by the director of the department on matters relating to the functions and responsibilities of the division and which seeks public input relevant to such functions and responsibilities.

~~(k)~~ **(m)** "Public water supply" or "public water system" means a waterworks system that provides water for drinking or household purposes to persons other than the supplier of the water, and does not include either of the following:

(i) A waterworks system that supplies water to only 1 living unit.

(ii) A waterworks system that consists solely of customer site piping.

~~(l)~~ **(n)** "Pumping water level" means the distance measured from an established datum at or above ground level to the water surface in a well being pumped at a known rate for a known period of time.

~~(m)~~ **(o)** "Rated treatment capacity" means 1 or any combination of the following capacities when water treatment is practiced:

(i) Rated capacity from an approved surface water supply, ground water supply under the direct influence of surface water, or complete treatment system as contained in R 325.11006.

(ii) Firm capacity from an approved ground water supply where firm capacity means the production capability of each respective component of the waterworks system with the largest well, pump, or treatment unit out of service.

(iii) Available capacity obtained under contract and capable of delivery from another approved public water supply.

~~(n)~~ **(p)** "Raw water" means water that is obtained from a source by a public water supply before ~~a supplier of water~~ **the public water supply** provides any treatment or distributes the water to its customers.

~~(o)~~ **(q)** "Regional administrator" means the EPA region V administrator.

~~(p)~~ **(r)** "Regulated VOCs" means a group of volatile organic chemicals for which state drinking water standards have been promulgated, but does not include total trihalomethanes.

~~(q)~~ **(s)** "Removed from service" means physically disconnected from the waterworks system in a manner that would prevent the inadvertent use of the well and would require specific authorization from the ~~supplier of water~~ **public water supply** to reconnect.

~~(r)~~ **(t)** "Repeat sample" means a sample that is collected and analyzed in response to a previous coliform-positive sample.

~~(s)~~ **(u)** "Resident" means an individual who owns or occupies a living unit.

~~(t)~~ **(v)** "Routine sample" means a water sample that is collected and analyzed to meet the monitoring requirements for total coliform, as outlined in the written sampling plan.

R 325.10108 Definitions; S.

Rule 108. As used in these rules:

(a) "Sanitary survey" means an evaluation, including an on-site review of a waterworks system or a portion of the waterworks system, including all of the following applicable components for existing or potential health hazards for the purpose of determining the ability of the public water supply to produce, treat, and distribute adequate quantities of water meeting state drinking water standards:

(i) Source.

(ii) Treatment.

(iii) Distribution system.

(iv) Finished water storage.

(v) Pumps, pump facilities, and controls.

(vi) Monitoring, reporting, and data verification.

(vii) System management and operation.

(viii) Operator compliance with state requirements.

(b) "Service connection" means a direct connection from a distribution water main to a living unit or other site to provide water for drinking or household purposes.

(c) "Service line sample" means a 1 liter sample of water that has been standing for not less than 6 hours in a service line.

(d) "Shift operator" means a certified operator, other than the operator in charge, who is in charge of an operating shift of a waterworks system.

(e) "Single-family structure," for the purpose of lead and copper control, means a building which is constructed as a single-family residence and which is currently used as either a residence or a place of business.

(f) "Small water supply" or "small water system," for the purpose of lead and copper control, means a public water supply that serves fewer than 3,301 persons.

(g) "SOC" means synthetic organic chemical.

(h) "Source" means the point of origin of raw water or means treated water that is purchased or obtained by a public water supply, by a water hauler, or by a person who provides bottled water.

(i) "State drinking water standards" means quality standards setting limits for contaminant levels or establishing treatment techniques to meet standards necessary to protect the public health.

(j) "Static water level" means the distance measured from an established datum at or above ground level to the water surface in a well which is not being pumped, which is not under the influence of pumping, and which is not flowing under artesian pressure.

(k) "Subpart H systems~~"~~ **or "Subpart H supply"** means **a** public water ~~systems~~ **supply** using surface water or ground water under the direct influence of surface water as a source.

(l) "Suction line" means a pipe or line that is connected to the inlet side of a pump or pumping equipment.

(m) "Supplier of water" or "supplier" means a person who owns or operates a public water supply, and includes a water hauler.

(n) "Surface water" means water that rests or flows on the surface of the ground.

(o) "SUVA" means specific ultraviolet absorption at 254 nanometers (nm), an indicator of the humic content of water. It is a calculated parameter obtained by dividing a sample's ultraviolet absorption at a wavelength of 254 nm (uv254) (in m-1) by its concentration of dissolved organic carbon (DOC) (in mg/l). Therefore, SUVA units are l/mg-m.

(p) "System with a single service connection" means a public water supply that supplies drinking water to consumers through a single service line.

R 325.10109 Definitions; T to Y.

Rule 109. As used in these rules:

(a) "Test well" means a well that is drilled on a site that has not been approved for use as a production well in accordance with the provisions of part 8 of these rules.

(b) "Too numerous to count" means that the total number of bacterial colonies is more than 200 on a 47-millimeter diameter membrane filter.

(c) "Total organic carbon ~~(TOC)~~" **or "TOC"** means total organic carbon in mg/l measured using heat, oxygen, ultraviolet irradiation, chemical oxidants, or combinations of these oxidants that convert organic carbon to carbon dioxide, rounded to 2 significant figures.

(d) "Total trihalomethanes" or "TTHM" means the sum of the concentration, in milligrams per liter, rounded to 2 significant figures, of all of the following:

(i) The trihalomethane compounds.

(ii) Trichloromethane (chloroform).

(iii) Dibromochloromethane.

(iv) Bromodichloromethane.

(v) Tribromomethane (bromoform).

(e) "Transient noncommunity water supply" or "transient noncommunity water system" means a noncommunity supply that does not meet the definition of nontransient noncommunity water supply in R 325.10106(h).

(f) "Treatment system" means a facility or structure and associated appurtenances installed for the purpose of treating drinking water before delivery to a distribution system.

(g) "Treatment technique" means a minimum treatment requirement or a necessary methodology or technology that is employed by a ~~supplier of water~~ **public water supply** for the control of the chemical, physical, biological, or radiological characteristics of the public water supply.

(h) "Trihalomethane" or "THM" means 1 of the family of organic compounds named as derivatives of methane, wherein 3 of the 4 hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure.

(i) "Two-stage lime softening" means a process in which chemical addition and hardness precipitation occur in each of two distinct unit clarification processes in series prior to filtration.

(~~i~~**j**) "Unregulated contaminants" means a group of contaminants for which state drinking water standards have not been promulgated, but for which monitoring requirements apply.

(~~j~~**k**) "Variance" means an order, with appropriate conditions and compliance schedules and requirements, which is issued by the director to a ~~supplier of water~~ **public water supply** and which permits a public water supply to be in noncompliance with a state drinking water standard, including a specified treatment technique.

(~~k~~**l**) "VOC" means volatile organic chemical.

(~~l~~**m**) "Water hauler" means a person engaged in bulk vehicular transportation of water to other than the water hauler's own household which is intended for use or used for drinking or household purposes. Excluded from this definition are those persons providing water solely for employee use.

(~~m~~**n**) "Water transportation tank" means a tank that is associated with an over-the-road vehicle that is used for the bulk transport of drinking water.

(~~n~~**o**) "Waterworks system" or "system" means a system of pipes and structures through which water is obtained and distributed, including, but not limited to all of the following which are actually used or intended for use for the purpose of furnishing water for drinking or household purposes:

(i) Wells and well structures, intakes, and cribs.

(ii) Pumping stations.

(iii) Treatment plants.

(iv) Storage tanks.

(v) Pipelines and appurtenances.

(vi) A combination of the items specified in this subdivision.

(p) "Wholesale system" or "wholesale supply" means a public water supply that treats source water as necessary to produce finished water and then delivers some or all of that finished water to another public water supply. Delivery may be through a direct connection or through the distribution system of one or more consecutive supplies.

(~~o~~**p**) "Year-round service" means the ability of a supplier of water to provide drinking water on a continuous basis to a living unit or facility.

R 325.10112 Adoption by reference.

Rule 112. The department adopts by reference the publication entitled "Maximum Permissible Body Burdens and Maximum Permissible Concentrations of Radionuclides in Air and in Water for Occupational Exposure," NCRP Report 22, 1963, as referred to in parts 1 and 6 of these rules. The adopted material is available from the National Council on Radiation Protection **and Measurements** at the address in R 325.10116(c) for a cost of $20.00 at the time of adoption of these rules. The adopted material is available for inspection, or copies are available at no cost from the offices of the department at the address in R 325.10116(a).

R 325.10113 Compliance with rules; guidance information.

Rule 113. ~~Suppliers of water~~ **Public water supplies** may use the information ~~set forth~~ in the following publications ~~for general~~ **as** guidance ~~in complying~~ **to comply** with ~~the provisions of~~ these rules:

(a) Recommended standards for water works, prepared by the Great Lakes--upper Mississippi river board of state sanitary engineers, is available for inspection at the department offices in Lansing~~ and Negaunee~~, and may be purchased at a cost of ~~$8.00~~ **$12.00** from the Health Education Services, P.O. Box 7126, Albany, New York 12224 **telephone 518-439-7286, Internet http://www.hes.org/**.

(b) The American water works association manual M 19, emergency planning for water ~~utility management, 1973~~ **utilities, 2001**, as referred to in part 23, is available for inspection at the department offices in Lansing~~ and Negaunee~~, and may be purchased at a cost of

~~$45.00~~ **$95.00** from the American Water Works Association, 6666 West Quincy Avenue, Denver, Colorado 80235, telephone 1-800-926-7337, Internet www.awwa.org.

(c) Suggested practices for waterworks design, construction and operation for type I public water supplies, February 2008, prepared by the Michigan department of environmental quality, water bureau, is available for inspection at the department offices in Lansing and on the Internet at http://www.michigan.gov/deq.

R 325.10116 Addresses.

Rule 116. The following are addresses and contact information of the department and other organizations referred to in these rules:

(a) Department of Environmental Quality, ~~Drinking Water And Radiological Protection Division~~ **Water Bureau**, 525 West Allegan Street, Post Office Box ~~30630~~ **30273**, Lansing, MI 48909~~-8130~~**-7773**, Telephone 517-241-1300. Internet address: http://www.~~deq.state.mi.us~~**michigan.gov/deq**.

(b) Superintendent of Documents, United States Government Printing Office, Post Office Box 371954, Pittsburgh, PA 15250 7954, Telephone 202 512 1800. Internet address: ~~http://www.access.gpo.gov/su_docs~~ **http://www.gpoaccess.gov/index.html**.

(c) National Council On Radiation Protection **and Measurements**, 7910 Woodmont Avenue, Suite ~~800~~ **400**, Bethesda, Maryland 20814**-3095**, Telephone 301 657 2652. Internet address: ~~http://www.ncrp.com~~ **http://www.ncrponline.org/**.

PART 3. VARIANCES, EXEMPTIONS AND TREATMENT TECHNOLOGIES

R 325.10308b Best available technology.

Rule 308b. (1) The department identifies the following as the best technology, treatment technique, or other means generally available for achieving compliance with the MCL:

(a) For organic contaminants in R 325.10604b and R 325.10604d, the best available technologies, treatment techniques, or other means available for achieving compliance with the MCLs are granular activated carbon (GAC), packed tower aeration (PTA), or oxidation (OX), as listed in table 1 of this rule.

Table 1 Best available technologies for organic contaminants

Contaminant	GAC	PTA	OX
Alachlor	x		
Aldicarb	x		
Aldicarb sulfone	x		
Aldicarb sulfoxide	x		
Atrazine	x		
Benzene	x	x	
Benzo(a)pyrene	x		
Carbofuran	x		
Carbon tetrachloride	x	x	
Chlordane	x		
Dalapon	x		
2,4 D	x		
Di (2 ethylhexyl)adipate	x	x	
Di (2 ethylhexyl)phthalate	x		
Dibromochloropropane (DBCP)	x	x	
o Dichlorobenzene	x	x	

para Dichlorobenzene	x	x	
1,2 Dichloroethane	x	x	
1,1 Dichloroethylene	x	x	
cis 1,2 Dichloroethylene	x	x	
trans 1,2 Dichloroethylene	x	x	
Dichloromethane		x	
1,2 Dichloropropane	x	x	
Dinoseb	x		
Diquat	x		
Endothall	x		
Endrin	x		
Ethylbenzene	x	x	
Ethylene Dibromide (EDB)	x	x	
Glyphosate			x
Heptachlor	x		
Heptachlor epoxide	x		
Hexachlorobenzene	x		
Hexachlorocyclopentadiene	x	x	
Lindane	x		
Methoxychlor	x		
Monochlorobenzene	x	x	
Oxamyl (Vydate)	x		
Pentachlorophenol	x		
Picloram	x		
Polychlorinated biphenyls(PCB)	x		
Simazine	x		
Styrene	x	x	
2,3,7,8 TCDD (Dioxin)	x		
Tetrachloroethylene	x	x	
Toluene	x	x	
Toxaphene	x		
2,4,5 TP (Silvex)	x		
1,2,4 Trichlorobenzene	x	x	
1,1,1 Trichloroethane	x	x	
1,1,2 Trichloroethane	x	x	
Trichloroethylene	x	x	
Vinyl chloride		x	
Xylene	x	x	

(b) For inorganic contaminants in R 325.10604c, the best available technologies, treatment techniques, or other means available for achieving compliance with the MCLs are listed in table 2 of this rule. The affordable technology, treatment technique, or other means available to supplies serving 10,000 or fewer people for achieving compliance with the maximum contaminant level for arsenic are listed in table 3 of this rule.

Table 2 Best available technologies for inorganic contaminants

Chemical name	Best available technologies
Antimony	2,7

Arsenic4	1,2, 5,6,7,9,115
Asbestos	2,3,8
Barium	5,6,7,9
Beryllium	1,2,5,6,7
Cadmium	2,5,6,7
Chromium	2,5,62,7
Cyanide	5,7,10
Mercury	21,4,61,71
Nickel	5,6,7
Nitrate	5,7,9
Nitrite	5,7
Selenium	1,23,6,7,9
Thallium	1,5

1 Best available technology only if influent Hg concentrations are 10 µg/l or less.
2 Best available technology for chromium III only.
3 Best available technology for selenium IV only.
4 BATs for Arsenic V. Pre-oxidation may be required to convert Arsenic III to Arsenic V.
5 To obtain high removals, iron to arsenic ratio shall be at least 20:1.

Key to best available technologies in table:
1 = activated alumina
2 = coagulation/filtration (not BAT for supplies with fewer than 500 service connections)
3 = direct and diatomite filtration
4 = granular activated carbon
5 = ion exchange
6 = lime softening (not BAT for supplies with fewer than 500 service connections)
7 = reverse osmosis
8 = corrosion control
9 = electrodialysis
10 = alkaline chlorination (pH greater than or equal to 8.5)
11 = oxidation/filtration

Table 3 Small supplies compliance technologies (SSCTs) for arsenic1

Small supply compliance technology	Affordable for listed small supply categories.2
Activated alumina (centralized)	All size categories.
Activated alumina (point-of-use)3	All size categories.
Coagulation/filtration	501-3,300, 3,301-10,000.
Coagulation-assisted microfiltration	501-3,300, 3,301-10,000.
Electrodialysis reversal	501-3,300, 3,301-10,000.
Enhanced coagulation/filtration	All size categories.
Enhanced lime softening (pH more than 10.5)	All size categories.
Ion exchange	All size categories.
Lime softening	501-3,300, 3,301-10,000.
Oxidation/filtration4	All size categories.
Reverse osmosis (centralized)	501-3,300, 3,301-10,000.
Reverse osmosis (point-of-use)3	All size categories.

1 SSCTs for Arsenic V. Pre-oxidation may be required to convert Arsenic III to Arsenic V.

2 Three categories of small ~~systems~~ **supplies** are: (i) those serving 25 or more, but fewer than 501, (ii) those serving more than 500, but fewer than 3,301, and (iii) those serving more than 3,300, but fewer than 10,001.

3 POU shall not be used to obtain a variance.

4 To obtain high removals, iron to arsenic ratio shall be at least 20:1.

(c) For radionuclide contaminants in R 325.10603, the best available technologies, treatment techniques, or other means available for achieving compliance with the MCLs are listed in table 4 for all size supplies. The affordable technology, treatment technique, or other means available for achieving compliance with the maximum contaminant level are listed in table 5 for supplies serving 10,000 or fewer people as categorized in table 6.

Table 4 Best available technologies for radionuclide contaminants

Contaminant	Best available technologies.
Combined radium 226 and radium 228	Ion exchange, reverse osmosis, lime softening.
Uranium	Ion exchange, reverse osmosis, lime softening, coagulation/filtration.
Gross alpha particle activity (excluding radon and uranium)	Reverse osmosis.
Beta particle and proton radioactivity	Ion exchange, reverse osmosis.

Table 5 List of small supplies compliance technologies for radionuclides and limitations to use

Unit Technologies	Limitations (see footnotes)	Operator skill level required *	Raw water quality range and considerations.
1. Ion exchange	(a)	Intermediate	All ground waters.
2. Reverse osmosis (RO)	(b)	Advanced	Surface waters usually require pre-filtration.
3. Lime softening	(c)	Advanced	All waters.
4. Green sand filtration	(d)	Basic	
5. Co-precipitation and Barium sulfate	(e)	Intermediate to Advanced	Ground waters with suitable water quality.
6. Electrodialysis/ electrodialysis reversal	Not applicable	Basic to intermediate	All ground waters.
7. Pre-formed hydrous Manganese oxide filtration.	(f)	Intermediate	All ground waters.
8. Activated alumina	(a), (g)	Advanced	All ground waters; competing anion concentrations may affect regeneration frequency.
9. Enhanced coagulation/ filtration	(h)	Advanced	Can treat a wide range of water

			qualities.

* An operator with a basic skill level has minimal experience in the water treatment field and can perform the necessary system operation and monitoring if provided with proper instruction. The operator is capable of reading and following explicit directions. An operator with an intermediate skill level understands the principles of water treatment and has a knowledge of the regulatory framework. The operator is capable of making system changes in response to source water fluctuations. An operator with an advanced skill level possesses a thorough understanding of the principles of system operation. The operator is knowledgeable in water treatment and regulatory requirements. The operator may, however, have advanced knowledge of only the particular treatment technology. The operator seeks information, remains informed, and reliably interprets and responds to water fluctuations and system intricacies.

Limitations Footnotes: Technologies for Radionuclides:

a The regeneration solution contains high concentrations of the contaminant ions. Disposal options shall be carefully considered before choosing this technology.

b Reject water disposal options shall be carefully considered before choosing this technology.

c The combination of variable source water quality and the complexity of the water chemistry involved may make this technology too complex for small surface water systems.

d Removal efficiencies may vary depending on water quality.

e This technology may be very limited in application to small systems. Since the process requires static mixing, detention basins, and filtration, it is most applicable to systems with sufficiently high sulfate levels that already have a suitable filtration treatment train in place.

f This technology is most applicable to small systems that already have filtration in place.

g Handling of chemicals required during regeneration and pH adjustment may be too difficult for small systems without an adequately trained operator.

h Assumes modification to a coagulation/filtration process already in place.

Table 6 Compliance technologies by supply size category for radionuclide requirements

Contaminant	Compliance technologies* for supply size categories (population served)		
	25-500	501-3,300	3,301 – 10,000
1. Combined radium 226 and radium 228	1, 2, 3, 4, 5, 6, 7	1, 2, 3, 4, 5, 6, 7	1, 2, 3, 4, 5, 6, 7
2. Gross alpha particle activity	2	2	2
3. Beta particle activity and photon activity	1, 2	1, 2	1, 2
4. Uranium	1, 8, 9	1, 2, 3, 8, 9	1, 2, 3, 8, 9

* Numbers correspond to those technologies listed in Table 5 of this rule.

~~(d) For disinfection byproducts under R 325.10610(1), the best available technologies, treatment techniques, or other means available for achieving compliance with the MCLs are listed in table 7 of this rule.~~

~~Table 7 Best available technologies for disinfection byproducts~~

~~Disinfection byproduct~~	~~Best available technology.~~
~~TTHM or HAA5~~	~~Enhanced coagulation or enhanced~~

	~~softening or GAC10, with chlorine as the primary and residual disinfectant.~~
~~Bromate~~	~~Control of ozone treatment process to reduce production of bromate.~~
~~Chlorite~~	~~Control of treatment processes to reduce disinfectant demand and control of disinfection treatment processes to reduce disinfectant levels.~~

~~(e) The best available technologies, treatment techniques, or other means available for achieving compliance with the maximum residual disinfectant levels under R 325.10610a(1) are control of treatment processes to reduce disinfectant demand and control of disinfection treatment processes to reduce disinfectant levels.~~

(2) The department shall require ~~suppliers of~~ community water ~~systems~~ **supplies** and nontransient, noncommunity water ~~systems~~ **supplies** to employ a treatment method identified in subrule (1) of this rule as a condition for granting a variance, except as provided in subrule (3) of this rule. If, after the treatment method is installed in the system, the ~~system~~ **supply** cannot meet the MCL, then the ~~system~~ **supply** shall be eligible for a variance ~~pursuant to~~ **under** this part and section 20 of the act.

(3) If a ~~supplier of water~~ **supply** demonstrates through comprehensive engineering assessments, which may include pilot plant studies, that the treatment methods identified in subrule (1) of this rule may only achieve a de minimis reduction in contaminants, then the department may issue a schedule of compliance that requires the ~~supplier of water~~ **supply** being granted the variance to examine other treatment methods as a condition of obtaining the variance.

(4) If the department determines that a treatment method identified in subrule (3) of this rule is technically feasible, then the department may require the ~~supplier of water~~ **supply** to use that treatment method in connection with a compliance schedule issued ~~pursuant to~~ **under** section 20 of the act. The department's determination shall be based on studies by the ~~supplier of water~~ **supply** and other relevant information.

(5) The department may require a community or noncommunity supply to use point-of-use devices, point-of-entry devices, or other means as a condition of granting a variance or an exemption from the requirements of R 325.10603, R 325.10604b, R 325.10604c, or R 325.10604d, to avoid an unreasonable risk to health. The department may require a public water ~~system~~ **supply** to use point-of-use devices or other means, but not point-of-entry devices, as a condition for granting an exemption from corrosion control treatment requirements for lead and copper in R 325.10604f(2) and (3) to avoid an unreasonable risk to health. The department may require a public water ~~system~~ **supply** to use point-of-entry devices as a condition for granting an exemption from the source water and lead service line replacement requirements for lead and copper under R 325.10604f(4) and (5) to avoid an unreasonable risk to health, provided the supply demonstrates that the device will not cause an increased corrosion of lead and copper bearing materials located between the device and the tap that may increase contaminant levels at the tap.

(6) Community or noncommunity water supplies that use point-of-use or point-of-entry devices under this rule shall meet the conditions in R 325.10313.

R 325.10313 Criteria for water supplies using POE, or POU, or both.

Rule 313. (1) Community and noncommunity water supplies shall not use point-of-use devices (POU) or point-of-entry devices (POE) except as required by the department under R 325.10308b or under all of the following provisions with department approval:

(a) Community water supplies may use POE to comply with the maximum contaminant level or treatment technique for organic, inorganic, and radiological contaminants.

(b) Noncommunity water supplies may use POU, or POE, or both, to comply with maximum contaminant levels or treatment techniques for organic and inorganic contaminants.

(c) An alternative source of water that meets state drinking water standards is not available.

(2) Supplies that use POU or POE, or both, shall meet all of the following requirements:

(a) The supply shall operate and maintain the POU, or POE, or both.

(b) Before POU, or POE, or both, are installed, the supply shall obtain department approval of a monitoring plan that ensures that the devices provide health protection equivalent to that provided by central water treatment. If the POU, or POE, or both, are being used to comply with maximum contaminant levels or treatment techniques, then "equivalent" means that the water shall meet all state drinking water standards and shall be of acceptable quality similar to water distributed by a well-operated central treatment plant. At a minimum, the monitoring plan shall include all of the following:

(i) Contaminants and parameters to be analyzed.

(ii) Physical measurements and observations, such as total flow treated and mechanical condition of the treatment equipment.

(iii) Location of sampling sites.

(iv) Frequency of sampling. Approximately 10% of the treatment units shall be sampled at regular intervals so that all the POE or POU are monitored at least as frequently as required in part 7 for a particular contaminant. For example, for a contaminant that is required to be sampled every 3 years, 10% of the POE or POU shall be monitored quarterly so that in 3 years time all of the POE or POU have been monitored. The department may approve an alternate frequency that better represents the rate of degradation of the POE or POU.

(c) Before POU, or POE, or both, are installed, the supply shall obtain department approval of a technology plan that ensures that effective technology is applied and that the microbiological safety of the water is maintained at all times. At a minimum, the technology plan shall include all of the following:

(i) The POU, or POE, or both, shall be equipped with mechanical warnings to ensure that customers are automatically notified of operational problems.

(ii) If a specific type of POU or POE has been independently certified to comply with the maximum contaminant level or treatment technique in accordance with the American national standards institute/national sanitation foundation standards 44, 53, 58, or 62, as adopted by reference in this paragraph, then individual units of that type shall be used to comply with the maximum contaminant level or treatment technique. A supply may use an alternate type of POU or POE if the supply demonstrates to the department, using pilot plant studies or other means, that the alternative POU or POE consistently complies with the maximum contaminant level or treatment technique and the department approves the use of the POU or POE. ~~The department adopts by reference ANSI/NSF standards 44-2002 (February 8, 2002) as amended by 44-2002 Addendum 1.0-2002 (July 31, 2002), 53-2002e (November 14, 2003), 58-2003 (February 2, 2004), and 62-1999 (September 1, 1999) as amended by 62-1999 Addendum 1.0-2002 (July 31, 2002). The adopted material is available from NSF at 789 North Dixboro Road, Ann Arbor, MI 48105, telephone 734-769-8010, Internet address http//www.nsf.org for a cost at the time of adoption of these rules of $150.00 for 44-2002, $45.00 for 44-2002 Addendum 1.0-2002, $150.00 for 53-2002e, $150.00 for 58-2003, $150 for 62-1999, and $45.00 for 62-1999 Addendum. The adopted material is available for inspection at the offices of the department at the address in R 325.10116(a).~~ **The department adopts by reference ANSI/NSF standards 44-2007**

(October 15, 2007), 53-2007a (July 10, 2007), as amended by 53-2007a Addendum 1.0 (October 22, 2007), 58-2007 (October 22, 2007), and 62-2007 (October 15, 2007). The adopted material is available from NSF at 789 North Dixboro Road, Ann Arbor, MI 48105, telephone 734-769-8010, Internet address http//www.nsf.org for a cost at the time of adoption of these rules of $160.00 for 44-2007, $160.00 for 53-2007a, $45.00 for 53-2007a Addendum 1.0, $160.00 for 58-2007, and $160 for 62-2007. The adopted material is available for inspection at the offices of the department at 525 W Allegan Street, Lansing, Michigan.

(iii) The design and application of the POU, or POE, or both, shall consider the potential for increasing concentrations of heterotrophic bacteria in water treated with activated carbon. Frequent backwashing, post-contactor disinfection, and heterotrophic plate count monitoring may ensure that the microbiological safety of the water is not compromised.

(d) The supply shall demonstrate that buildings connected to the system have sufficient POU, or POE, or both, that are properly installed, maintained, and monitored such that all of consumers shall be protected.

(e) If the POU, or POE, or both, are used to meet an MCL or treatment technique, then the supply shall replace or repair the POU or POE when the contaminant for which the device is intended to control is above the maximum contaminant level in a confirmed sample.

(3) Compliance with the maximum contaminant level shall be determined based on the analytical results obtained at each POU or POE, ~~otherwise called~~ **also known as** "sampling point". Compliance determination shall be made under R 325.10604b(2) for volatile organic contaminants, R 325.10604c(2) for inorganic contaminants, or R 325.10604d(2) for synthetic organic chemicals.

(4) Supplies that violate the MCL shall notify the department under part 7 of these rules and shall notify the public under part 4 of these rules. The supply may limit the distribution of the public notice to only persons served by the POU or POE that is out of compliance.

PART 4. PUBLIC NOTIFICATION AND PUBLIC EDUCATION

R 325.10401 Purpose.

Rule 401. The purpose of this part is to prescribe requirements of ~~suppliers of water~~ **public water supplies** to provide public notification to persons served by a public water ~~system~~ **supply** when the public water ~~system~~ **supply** is not in compliance with a state drinking water standard, a monitoring requirement, or the requirements of a compliance schedule prescribed by a variance or exemption or while a variance or exemption is in effect. This part also prescribes requirements for public education when a community or nontransient noncommunity water ~~system~~ **supply** exceeds the lead action level based on tap water samples collected under R 325.10710a. This part also prescribes requirements for consumer confidence reports (CCR) and annual water quality reports. **For the purpose of this part applicable public water supplies are also considered "water supplies" or "supplies."**

R 325.10401a General public notification requirements.

Rule 401a. (1) Each ~~supplier of a~~ community water ~~system~~ **supply**, nontransient noncommunity water ~~system~~ **supply**, or transient noncommunity water ~~system~~ **supply** shall give notice for violations of the maximum contaminant level (MCL), maximum residual disinfection level (MRDL), treatment technique (TT), monitoring requirements, testing procedures in these rules, and for other situations, as listed in the following provisions:

(a) Violations and other situations requiring public notice, including all of the following:

(i) Failure to comply with an applicable maximum contaminant level (MCL) or maximum residual disinfectant level (MRDL).

(ii) Failure to comply with a prescribed treatment technique (TT).

(iii) Failure to perform water quality monitoring, as required by part 7 of these rules.

(iv) Failure to comply with testing procedures as prescribed by part 6 of these rules.

(b) Variance and exemptions under part 3 of these rules, including both of the following:

(i) Operation under a variance or an exemption.

(ii) Failure to comply with the requirements of a schedule that has been set under a variance or exemption.

(c) Special public notices, including all of the following:

(i) Occurrence of a waterborne disease outbreak or other waterborne emergency.

(ii) Exceedance of the nitrate MCL by noncommunity water ~~systems~~ **supplies**, where granted permission by the department.

(iii) Fluoride level above 2 mg/l as specified in R 325.10408a.

(iv) Availability of unregulated contaminant monitoring data.

(v) Other violations and situations which are determined by the department to require a public notice under this part and which are not already listed in table 1 of this rule.

The tier assignment for each specific violation or situation requiring a public notice is identified in table 1 of this rule. **Community and noncommunity water supplies are also considered "water supplies" or "supplies" in this rule, R 325.402 to R 325.10407 and R 325.10408a to R 325.10409.**

(2) Public notice requirements are divided into 3 tiers to take into account the seriousness of the violation or situation and of the potential adverse health effects that may be involved. The public notice requirements for each violation or situation listed in subrule (1) of this rule are determined by the tier to which the violation or situation is assigned. The definition of each tier is provided in the following provisions:

(a) Tier 1 public notice is required for violations and situations that have significant potential to have serious adverse effects on human health as a result of short-term exposure.

(b) Tier 2 public notice is required for all other violations and situations that have potential to have serious adverse effects on human health.

(c) Tier 3 public notice is required for all other violations and situations not included in tier 1 and tier 2.

The tier assignment for each specific violation or situation is identified in table 1 of this rule.

(3) ~~Suppliers~~ **Supplies** shall provide public notice to the following:

(a) Each ~~supplier~~ **supply** shall provide public notice to persons served by the ~~system~~ **supply** as specified in this part. ~~Suppliers~~ **Supplies** that sell or otherwise provide drinking water to other public water ~~systems~~ **supplies**, such as to consecutive ~~systems~~ **supplies**, shall give public notice to the ~~supplier of the~~ consecutive ~~system~~ **supply**. The consecutive ~~system~~ **supply** shall provide public notice to the persons it serves.

(b) If a public water ~~system~~ **supply** has a violation in a portion of the distribution system that is physically or hydraulically isolated from other parts of the distribution system, then the department may grant permission, which shall be in writing, to the ~~supplier~~ **supply** to limit distribution of the public notice to only persons served by that portion of the system which is out of compliance. To be physically separated, the ~~supplier~~ **supply** shall show that the affected portion of the distribution system is separated from other parts of the distribution system with no interconnections. To be considered hydraulically separated, the ~~supplier~~ **supply** shall show that the design of the distribution system or the system operation, or both, created a situation where water in the affected portion is effectively isolated from the

water in all other parts of the distribution system because of projected water flow patterns and water pressure zones.

(4) The ~~supplier~~ **supply**, within 10 days of completing the public notification requirements under this part for the initial public notice and applicable repeat notices, shall submit to the department a certification that it fully complied with the public notification regulations. The ~~supplier~~ **supply** shall include with this certification a representative copy of each type of notice distributed, published, posted, and made available to the persons served by the ~~system~~ **supply** and to the media.

Table 1 Violations and other situations requiring public notice

Contaminant	MCL/MRDL/TT violations [1]		Monitoring & testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
I. Violations of MCL, MRDL, treatment technique, monitoring and reporting, and testing procedure requirements:				
A. Microbiological contaminants				
Total coliform	2	R 325.10602(a) and (b)	3	R 325.10704 **to** ~~R 325.10705~~ ~~R 325.10706~~ ~~R 325.10707~~ R 325.10707a R 325.10702(2) R 325.10707b(4)
Fecal coliform/E. coli	1	R 325.10602(c)	1, 3 [2]	R 325.10704(3) R 325.10707b(4)
Turbidity (for TT violations resulting from a single exceedance of maximum allowable turbidity level)	2, 1 [3]	R 325.10611b	3	R 325.10605 R 325.10720(2)(a) and (b)
Violations, other than violations resulting from single exceedance of max. allowable turbidity level (TT)	2	R 325.10611, R 325.10611a, and R 325.10611b	3	R 325.10605 R 325.10720(2)(c) and (d)
Violations of disinfection profiling and benchmarking	N/A	N/A	3	R 325.10722
Violations of filter backwash recycling provisions	2	R 325.10611c	3	R 325.150~~6(7)~~
Violations of enhanced treatment for cryptosporidium	**2**	**R 325.10611e to R 325.10611m**	**2**	**Failure to sample any 3 months under 40 CFR 141.701(c) as adopted by reference in R 325.10720b.**
			3	**40 CFR 141.701 to 141.705, as adopted by reference in R 325.10720b, except 141.701(c)** **R 325.10720c to R 325.10720d**
Violations of rules for ground water supplies subject to R 325.10612	**2**	**R 325.10612b**	**3**	**R 325.10739(7) R 325.10612b(4)**
B. Inorganic chemicals (IOC)				

Contaminant	MCL/MRDL/TT violations [1]		Monitoring & testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
Antimony	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Arsenic	2	R 325.10604c(1)	3	R 325.10710(4) and (5) R 325.**10**605
Asbestos (fibers longer than 10 µm)	2	R 325.10604c(1)	3	R 325.10710(4), (6)
Barium	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Beryllium	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Cadmium	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Chromium (total)	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Cyanide (free)	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Fluoride	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Mercury (inorganic)	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Nitrate (as nitrogen)	1	R 325.10604c(1)	1, 3 [4]	R 325.10710(3), (4), (7), and (9)(b)
Nitrite (as nitrogen)	1	R 325.10604c(1)	1, 3 [4]	R 325.10710(3), (4), (8), and (9)(b)
Total nitrate and nitrite (as nitrogen)	1	R 325.10604c(1)	3	R 325.10710(4)
Selenium	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Thallium	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
C. Lead and copper (action level for lead is 0.015 mg/l, for copper is 1.3 mg/l)				
Lead and copper rule (TT)	2	R 325.10604f(1) – (5) ~~and~~ R 325.10410**(2) and (3)**	3	R 325.10710a to R 325.10710c and R 325.10605
D. Synthetic organic chemicals (SOC)				
2,4-D	2	R 325.10604d(1)	3	R 325.10717
2,4,5-TP (silvex)	2	R 325.10604d(1)	3	R 325.10717
Alachlor	2	R 325.10604d(1)	3	R 325.10717
Atrazine	2	R 325.10604d(1)	3	R 325.10717
Benzo(a)pyrene (PAHs)	2	R 325.10604d(1)	3	R 325.10717
Carbofuran	2	R 325.10604d(1)	3	R 325.10717
Chlordane	2	R 325.10604d(1)	3	R 325.10717
Dalapon	2	R 325.10604d(1)	3	R 325.10717
Di (2-ethylhexyl) adipate	2	R 325.10604d(1)	3	R 325.10717
Di (2-ethylhexyl) phthalate	2	R 325.10604d(1)	3	R 325.10717
Dibromochloropropane	2	R 325.10604d(1)	3	R 325.10717
Dinoseb	2	R 325.10604d(1)	3	R 325.10717
Dioxin (2,3,7,8-TCDD)	2	R 325.10604d(1)	3	R 325.10717
Diquat	2	R 325.10604d(1)	3	R 325.10717
Endothall	2	R 325.10604d(1)	3	R 325.10717
Endrin	2	R 325.10604d(1)	3	R 325.10717
Ethylene dibromide	2	R 325.10604d(1)	3	R 325.10717
Glyphosate	2	R 325.10604d(1)	3	R 325.10717
Heptachlor	2	R 325.10604d(1)	3	R 325.10717
Heptachlor epoxide	2	R 325.10604d(1)	3	R 325.10717
Hexachlorobenzene	2	R 325.10604d(1)	3	R 325.10717
Hexachlorocyclo-pentadiene	2	R 325.10604d(1)	3	R 325.10717
Lindane	2	R 325.10604d(1)	3	R 325.10717
Methoxychlor	2	R 325.10604d(1)	3	R 325.10717
Oxamyl (vydate)	2	R 325.10604d(1)	3	R 325.10717
Pentachlorophenol	2	R 325.10604d(1)	3	R 325.10717
Picloram	2	R 325.10604d(1)	3	R 325.10717

Contaminant	MCL/MRDL/TT violations [1]		Monitoring & testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
Polychlorinated biphenyls [PCBs]	2	R 325.10604d(1)	3	R 325.10717
Simazine	2	R 325.10604d(1)	3	R 325.10717
Toxaphene	2	R 325.10604d(1)	3	R 325.10717
E. Volatile organic chemicals (VOC)				
Benzene	2	R 325.10604b(1)	3	R 325.10716
Carbon tetrachloride	2	R 325.10604b(1)	3	R 325.10716
Chlorobenzene (monochloro-benzene)	2	R 325.10604b(1)	3	R 325.10716
O-dichlorobenzene	2	R 325.10604b(1)	3	R 325.10716
P-dichlorobenzene	2	R 325.10604b(1)	3	R 325.10716
1,2-dichloroethane	2	R 325.10604b(1)	3	R 325.10716
1,1-dichloroethylene	2	R 325.10604b(1)	3	R 325.10716
Cis-1,2-dichloroethylene	2	R 325.10604b(1)	3	R 325.10716
Trans-1,2-dichloroethylene	2	R 325.10604b(1)	3	R 325.10716
Dichloromethane	2	R 325.10604b(1)	3	R 325.10716
1,2-dichloropropane	2	R 325.10604b(1)	3	R 325.10716
Ethylbenzene	2	R 325.10604b(1)	3	R 325.10716
Styrene	2	R 325.10604b(1)	3	R 325.10716
Tetrachloro-ethylene	2	R 325.10604b(1)	3	R 325.10716
Toluene	2	R 325.10604b(1)	3	R 325.10716
1,2,4-trichlorobenzene	2	R 325.10604b(1)	3	R 325.10716
1,1,1-trichloroethane	2	R 325.10604b(1)	3	R 325.10716
1,1,2-trichloroethane	2	R 325.10604b(1)	3	R 325.10716
Trichloroethylene	2	R 325.10604b(1)	3	R 325.10716
Vinyl chloride	2	R 325.10604b(1)	3	R 325.10716
Xylenes (total)	2	R 325.10604b(1)	3	R 325.10716
F. Radioactive contaminants				
Beta/photon emitters	2	R 325.10603(2)(c)	3	R 325.10605 R 325.10725 R 325.10730
Alpha emitters (gross alpha)	2	R 325.10603(2)(b)	3	R 325.10605 R 325.10725 R 325.10726 R 325.10728 R 325.10729
Combined radium (226 & 228)	2	R 325.10603(2)(a)	3	R 325.10605 R 325.10725 R 325.10726 R 325.10728 R 325.10729
Uranium (pCi/L)	2	R 325.10603(2)(d)	3	R 325.10605 R 325.10725 R 325.10726 R 325.10728 R 325.10729

Contaminant	MCL/MRDL/TT violations [1]		Monitoring & testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
G. Disinfection byproducts (DBP), byproduct precursors, disinfectant residuals. Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBP). The department sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THM) and haloacetic acids (HAA).~~[5]~~ **See R 325.10610 to R 325.10610d, and R 325.10719e to R 325.10719n for disinfection byproduct MCLs, disinfectant MRDLs, and related monitoring requirements.**				
Total trihalomethanes (TTHM)	2	R 325.10610**(2)** R 325.10610b(2)(a)	3	**R 325.10610d,** ~~R 325.10719a to~~ R 325.10719e(1) and (2)(a)**, and R 325.10719g to R 325.10719n**
Haloacetic acids (HAA)	2	R 325.10610 R 325.10610b(2)(a)	3	**R 325.10610d,** R 325.10719e(1) and (2)(a)**, and R 325.10719g to R 325.10719n**
Bromate	2	R 325.10610 R 325.10610b(2)(b)	3	R 325.10719e(1) and (2)(c)
Chloramine (MRDL)	2	R 325.10610a R 325.10610b(3)(a)	3	R 325.10719e(1) and (3)
Chlorine (MRDL)	2	R 325.10610a R 325.10610b(3)(a)	3	R 325.10719e(1) and (3)
Chlorite	2	R 325.10610 R 325.10610b(2)(c)	3	R 325.10719e(1) and (2)(b)
Chlorine dioxide (MRDL), where any 2 consecutive daily samples at entrance to distribution system only are above MRDL	2	R 325.10610a R 325.10610b(3)(b)(ii)	2 ~~*~~[6], 3	R 325.10719e(1), (3)(b)(i) and (iii)
	*** Failure to monitor for chlorine dioxide at the entrance to the distribution system the day after exceeding the MRDL at the entrance to the distribution system is a tier 2 violation.**			
Chlorine dioxide (MRDL), where sample(s) in distribution system the next day are also above MRDL	1 ~~*~~[7]	R 325.10610a R 325.10610b(3)(b)(i)	1	R 325.10719e(1), (3)(b)(ii) and (iii)
	*** If any daily sample taken at the entrance to the distribution system exceeds the MRDL for chlorine dioxide and 1 or more samples taken in the distribution system the next day exceed the MRDL, tier 1 notification is required. Failure to take the required samples in the distribution system after the MRDL is exceeded at the entry point also triggers tier 1 notification.**			
Control of DBP precursors—TOC (TT)	2	R 325.10610b(4) R 325.10610c	3	R 325.10719e(1) and (4)
Bench marking and disinfection profiling	N/A	N/A	3	R 325.10722
Development of monitoring plan	N/A	N/A	3	R 325.10719e(5)
H. Other treatment techniques				
Acrylamide (TT)	2	R 325.10604e	N/A	N/A
Epichlorohydrin (TT)	2	R 325.10604e	N/A	N/A
II. Other monitoring:				
Unregulated contaminants	N/A	N/A	3	~~R 325.10717b~~ **40 CFR 141.40** [5]
Nickel	N/A	N/A	3	R 325.10710(4), (5), and (9)

Contaminant	MCL/MRDL/TT violations [1]		Monitoring & testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
III. Public notification for variances and exemptions:				
Operation under a variance or exemption	3	R 325.10302 and R 325.10312	N/A	N/A
Violation of conditions of a variance or exemption	2	R 325.10302 and R 325.10312	N/A	N/A
IV. Other situations requiring public notification:				
Fluoride level above 2 mg/l	3	R 325.10408a(1)	N/A	N/A
Exceedance of nitrate MCL for noncommunity ~~systems~~ **supplies**, as allowed by the department	1	R 325.10604c(3)	N/A	N/A
Availability of unregulated contaminant monitoring data	3	R 325.10407	N/A	N/A
Waterborne disease outbreak	1	R 325.10734(4)	N/A	N/A
Source water sample positive for Fecal Indicator: E.coli, enterococci, or coliphage	**1**	**R 325.10739(6)**	**N/A**	**N/A**
Other waterborne emergencies and other situations as determined by the department	1 or 2 or 3 ***** [8]	N/A	N/A	N/A
	*** Waterborne emergencies require a tier 1 public notice. The department may place other situations in any tier it determines appropriate, based on threat to public health.**			

[1] MCL - Maximum contaminant level, MRDL - maximum residual disinfectant level, TT - treatment technique.

[2] Failure to test for fecal coliform or E. coli is a tier 1 violation if testing is not done after any repeat sample tests positive for coliform. All other total coliform monitoring and testing procedure violations are tier 3.

[3] ~~Systems~~ **Supplies** with treatment technique violations involving a single exceedance of a maximum turbidity limit under R 325.10611b(1) are required to initiate consultation with the department within 24 hours after learning of the violation. Based on this consultation, the department may subsequently decide to elevate the violation to tier 1. If a ~~system~~ **supply** is unable to make contact with the department in the 24-hour period, the violation is automatically elevated to tier 1.

[4] Failure to take a confirmation sample within 24 hours for nitrate or nitrite after an initial sample exceeds the MCL is a tier 1 violation. Other monitoring violations for nitrate are tier 3.

[5] **Title 40 CFR Part 141 Section 40, being 40 CFR 141.40, January 4, 2007, which pertains to Unregulated Contaminant Monitoring, is available for purchase for a cost of $61.00 from the Superintendent of Documents, United States Government Printing Office, Post Office Box 371954, Pittsburgh, PA 15250-7954, telephone 202-512-1800 or accessible on the Internet at http://www.gpoaccess.gov/index.html. The material is available for inspection at the offices of the department at 525 West Allegan Street, P.O. Box 30273, Lansing, Michigan, 48909-7773, telephone 517-241-1300, Internet address: http://www.michigan.gov/deq.** ~~See R 325.10610, R 325.10610a, and R 325.10719e for disinfection byproduct MCLs, disinfectant MRDLs, and related monitoring requirements.~~

~~[6] Failure to monitor for chlorine dioxide at the entrance to the distribution system the day after exceeding the MRDL at the entrance to the distribution system is a tier 2 violation.~~

~~[7] If any daily sample taken at the entrance to the distribution system exceeds the MRDL for chlorine dioxide and 1 or more samples taken in the distribution system the next day exceed the MRDL, tier 1 notification is required. Failure to take the required samples in the distribution system after the MRDL is exceeded at the entry point also triggers tier 1 notification.~~

[8] ~~Waterborne emergencies require a tier 1 public notice. The department may place other situations in any tier it determines appropriate, based on threat to public health.~~

R 325.10402 Tier 1 public notice; form, manner, and frequency of notice.

Rule 402. (1) A tier 1 public notice is required for all of the following violations and situations **in a community or noncommunity water supply that is subject to R 325.10401a**:

(a) Violation of the MCL for total coliforms when fecal coliform or E.

coli are present in the water distribution system as specified in R 325.10602, or when the ~~supplier~~ **water supply** fails to test for fecal coliforms or E. coli when a repeat sample tests positive for coliform as specified in R 325.10707.

(b) Violation of the MCL for nitrate, nitrite, or total nitrate and nitrite, as defined in R 325.10604c, or when the ~~supplier~~ **water supply** fails to take a confirmation sample within 24 hours of the ~~supplier's~~ **water supply's** receipt of the first sample result showing an exceedance of the nitrate or nitrite MCL, as specified in R 325.10710(9)(b).

(c) Exceedance of the nitrate MCL by noncommunity water ~~systems~~ **supplies**, where permitted to exceed the MCL by the department, as required under R 325.10408b.

(d) Violation of the MRDL for chlorine dioxide, as defined in R 325.10610a(1), when 1 or more samples taken in the distribution system the day following an exceedance of the MRDL at the entrance of the distribution system exceed the MRDL, or when the ~~supplier~~ **water supply** does not take the required samples in the distribution system, as specified in R 325.10610b(3)(b).

(e) Violation of the treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit under R 325.10611b(1) as identified in table 1 of R 325.10401a, where the department determines after consultation that a tier 1 notice is required or where consultation does not take place within 24 hours after the ~~supplier~~ **supply** learns of the violation.

(f) Occurrence of a waterborne disease outbreak or other waterborne emergency, such as a failure or significant interruption in key water treatment processes, a natural disaster that disrupts the water supply or distribution system, or a chemical spill or unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination.

(g) **Detection of E. coli, enterococci, or coliphage in source water samples as specified in R 325.10739(1) to (2).**

(h) Other violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure, as determined by the department either in these rules or on a case-by-case basis.

The tier assignment for each specific violation or situation is listed in table 1 of R 325.10401a.

(2) A tier 1 public notice shall be provided ~~pursuant to~~ **under** all the following provisions:

(a) ~~Suppliers~~ **Water supplies** shall provide the public notice as soon as practical but not later than 24 hours after the ~~supplier~~ **supply** learns of the violation or situation.

(b) The ~~supplier~~ **water supply** shall initiate consultation with the department as soon as practical, but not later than 24 hours after the ~~supplier~~ **supply** learns of the violation or situation, to determine additional public notice requirements.

(c) The ~~supplier~~ **water supply** shall comply with additional public notification requirements, including repeat notices or direction on the duration of the posted notices, established as a result of consultation with the department. These additional requirements

may include the timing, form, manner, frequency, and content of applicable repeat notices, and other actions designed to reach all persons served.

(3) ~~Suppliers~~ **Water supplies** shall provide the notice within 24 hours in a form and manner reasonably calculated to reach all persons served. The form and manner used by the ~~supplier~~ **supply** are to fit the specific situation, but shall be designed to reach residential, transient, and nontransient users of the ~~system~~ **supply**. In order to reach all persons served, ~~suppliers~~ **supplies** shall use, at a minimum, 1 or more of the following forms of delivery:

(a) Appropriate broadcast media, such as radio and television.

(b) Posting of the notice in conspicuous locations throughout the area served by the ~~system~~ **supply**.

(c) Hand delivery of the notice to persons served by the system.

(d) Another delivery method approved, in writing, by the department.

R 325.10403 Tier 2 public notice; form, manner, and frequency of notice.

Rule 403. (1) A tier 2 public notice is required for all of the following violations and situations **in a community or noncommunity water supply that is subject to R 325.10401a**:

(a) All violations of the MCL, MRDL, and treatment technique requirements, except where a tier 1 notice is required under R 325.10402(1) or where the department determines that a tier 1 notice is required.

(b) Violations of the monitoring and testing procedure requirements, where the department determines that a tier 2 rather than a tier 3 public notice is required, taking into account potential health impacts and persistence of the violation.

(c) Failure to comply with the terms and conditions of a variance or exemption in place.

The tier assignment for each specific violation or situation is listed in table 1 of R 325.10401a.

(d) Failure to take corrective action or failure to maintain at least 4-log treatment of viruses, using inactivation, removal, or a department-approved combination of 4-log virus inactivation and removal, before or at the first customer under R 325.10612a(1).

(2) A tier 2 public notice shall be provided ~~pursuant to~~ **under** all the following provisions:

(a) Supplie~~r~~s shall provide the public notice as soon as practical, but not later than 30 days after the ~~supplier~~ **supply** learns of the violation or situation. If the public notice is posted, the notice shall remain in place for as long as the violation or situation exists, but not for less than 7 days, even if the violation or situation is resolved. The department may, on a case by case basis, allow additional time for the initial notice of up to 3 months from the date the ~~supplier~~ **supply** learns of the violation or situation. Circumstances that may warrant an extension include, but are not limited to, coordination with billing cycles for mailing purposes and violations that were quickly resolved and no longer pose any risk to persons served. The department shall not grant an extension to the 30 day deadline for an unresolved violation posing potential risk from short-term exposure. Extensions granted by the department shall be in writing.

(b) The ~~supplier~~ **supply** shall repeat the notice every 3 months as long as the violation or situation exists, unless the department determines that appropriate circumstances warrant a different repeat notice frequency. The repeat notice shall not be given less frequently than once per year. The department shall not allow less frequent repeat notice for an MCL violation of total coliform under R 325.10602 or a treatment technique violation of filtration or disinfection under R 325.10611, R 325.10611a, or R 325.10611b. The department may, on a case by case basis, reduce the repeat notice frequency for other ongoing violations requiring a tier 2 repeat notice. Circumstances that may warrant a reduction in frequency include, but are not limited to, coordination with billing cycles for mailing purposes and consolidating notices for violations and situations occurring within a given year into an

annual notice to provide for more effective communication with the consumer. Department determinations allowing repeat notices to be given less frequently than once every 3 months shall be in writing.

(c) For the turbidity violations specified in this subdivision, supplier~~s~~ shall consult with the department as soon as practical but not later than 24 hours after the ~~supplier~~ **supply** learns of the violation, to determine whether a tier 1 public notice under R 325.10402(1) is required to protect public health. When consultation does not take place within the 24 hour period, the ~~supplier~~ **supply** shall distribute a tier 1 notice of the violation within the next 24 hours, which shall be not more than 48 hours after the ~~supplier~~ **supply** learns of the violation, and shall follow the requirements under R 325.10402(2) and (3). Consultation with the department is required for violations of the treatment technique requirement under R 325.10611 resulting from a single exceedance of the maximum allowable turbidity limit under R 325.**10**611b.

(3) Supplier~~s~~ shall provide the initial tier 2 public notice and applicable repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of ~~system~~ **supply**, but it shall, at a minimum, meet all of the following requirements:

(a) Unless directed otherwise by the department, in writing, ~~suppliers of~~ community water ~~systems~~ **supplies** shall provide notice by using both of the following forms of delivery:

(i) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the ~~supplier~~**supply**.

(ii) Other methods reasonably calculated to reach other persons regularly served by the ~~system~~ **supply**, if they would not normally be reached by the notice required in paragraph (i) of this subdivision. Other persons served may include those who do not pay water bills or do not have service connection addresses, such as house renters, apartment dwellers, university students, nursing home patients, and prison inmates. Other methods may include any of the following:

(A) Publication in a local newspaper.

(B) Delivery of multiple copies for distribution by customers that provide their drinking water to others, such as apartment building owners or large private employers.

(C) Posting in public places served by the system or on the internet.

(D) Delivery to community organizations.

(b) Unless directed otherwise by the department, in writing, ~~suppliers of~~ noncommunity water ~~systems~~ **supplies** shall use both of the following forms of delivery:

(i) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the system, or mailing or directly delivering to each customer and service connection, where known.

(ii) Other methods reasonably calculated to reach other persons served by the system if they would not normally be reached by the notice required in paragraph (i) of this subdivision. Other persons served may include those who may not see a posted notice because the notice is not in a location they routinely pass by. Other methods may include any of the following:

(A) Publication in a local newspaper or newsletter distributed to customers.

(B) Use of e mail to notify employees or students.

(C) Delivery of multiple copies in central locations, such as community centers.

R 325.10404 Tier 3 public notice; form, manner, and frequency of notice.

Rule 404. (1) A tier 3 public notice is required for all of the following violations and situations listed in this subrule **in a community or noncommunity water supply that is subject to R 325.10401a**:

(a) Monitoring violations under part 7 of these rules, except where a tier 1 notice is required under R 325.10402(1) or where the department determines that a tier 2 notice is required.

(b) Failure to comply with a testing procedure established in part 6 of these rules, except where a tier 1 notice is required under R 325.10402(1) or where the department determines that a tier 2 notice is required.

(c) Operation under a variance or exemption granted under section 20 of the safe drinking water act, 1976 PA 399, MCL 325.1001 et seq. and part 3 of these rules.

(d) Availability of unregulated contaminant monitoring results, as required under R 325.10407.

(e) Fluoride level above 2 mg/l as specified in R 325.10408a.

The tier assignment for each specific violation or situation is listed in table 1 of R 325.10401a.

(2) A tier 3 public notice shall be provided ~~pursuant to~~ **under** all the following provisions:

(a) Supplie~~r~~s shall provide the public notice not later than 1 year after the ~~supplier~~ **supply** learns of the violation or situation or begins operating under a variance or exemption. Following the initial notice, the ~~supplier~~ **supply** shall repeat the notice annually for as long as the violation, variance, exemption, or other situation exists. If the public notice is posted, the notice shall remain in place for as long as the violation, variance, exemption, or other situation exists, but for not less than 7 days, even if the violation or situation is resolved.

(b) Instead of individual tier 3 public notices, a ~~supplier~~ **supply** may use an annual report detailing all violations and situations that occurred during the previous 12 months, as long as the timing requirements of subdivision (a) of this subrule are met.

(3) Supplie~~r~~s shall provide the initial tier 3 public notice and applicable repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of ~~system~~ **supply**, but it shall, at a minimum, meet all of the following requirements:

(a) Unless directed otherwise by the department, in writing, ~~suppliers of~~ community water ~~systems~~ **supplies** shall provide notice by using both of the following forms of delivery:

(i) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the ~~supplier~~ **community supply**.

(ii) Other methods reasonably calculated to reach other persons regularly served by the ~~system~~ **community supply**, if they would not normally be reached by the notice required in paragraph (i) of this subdivision. Other persons served may include those who do not pay water bills or do not have service connection addresses, such as house renters, apartment dwellers, university students, nursing home patients, and prison inmates. Other methods may include any of the following:

(A) Publication in a local newspaper.

(B) Delivery of multiple copies for distribution by customers that provide their drinking water to others, such as apartment building owners or large private employers.

(C) Posting in public places served by the ~~system~~ **community supply** or on the internet.

(D) Delivery to community organizations.

(b) Unless directed otherwise by the department, in writing, ~~suppliers of~~ noncommunity water ~~systems~~ **supplies** shall provide notice by using both of the following forms of delivery:

(i) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the ~~system~~ **noncommunity supply** or mailing or directly delivering to each customer and service connection, where known.

(ii) Other methods reasonably calculated to reach other persons served by the ~~system~~ **noncommunity supply** if they would not normally be reached by the notice required in paragraph (i) of this subdivision. Other persons served may include those who may not see

a posted notice because the notice is not in a location they routinely pass by. Other methods may include any of the following:

(A) Publication in a local newspaper or newsletter distributed to customers.

(B) Use of e mail to notify employees or students.

(C) Delivery of multiple copies in central locations, such as community centers.

(4) For community water ~~systems~~ **supplies**, the consumer confidence report (CCR) required under R 325.10411 to R 325.10415 may be used as a vehicle for the initial tier 3 public notice and all required repeat notices, if all of the following requirements are satisfied:

(a) The CCR is provided to persons served not later than 12 months after the ~~supplier~~ **community water supply** learns of the violation or situation as required under subrule (2) of this rule.

(b) The tier 3 notice contained in the CCR follows the content requirements under R 325.10405.

(c) The CCR is distributed following the delivery requirements under subrule (3) of this rule.

R 325.10405 Content of public notice.

Rule 405. (1) If a ~~system~~ **community or noncommunity water supply that is subject to R 325.10401a** has a violation or situation requiring public notification, then each public notice shall include all of the following elements:

(a) A description of the violation or situation, including the contaminant or contaminants of concern, and, as applicable, the contaminant level or levels.

(b) When the violation or situation occurred.

(c) The potential adverse health effects from the violation or situation, including the standard language under subrule (4)(a) or (4)(b) of this rule, whichever is applicable.

(d) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water.

(e) If alternative water supplies should be used.

(f) What actions consumers should take, including when they should seek medical help, if known.

(g) What the ~~supplier~~ **supply** is doing to correct the violation or situation.

(h) When the ~~supplier~~ **supply** expects to return to compliance or resolve the situation.

(i) The name, business address, and phone number of the ~~supplier~~ **supply** or designee of the ~~supplier~~ **supply** as a source of additional information concerning the notice.

(j) A statement to encourage the notice recipient to distribute the public notice to other persons served, using the standard language under subrule (4)(c) of this rule, where applicable.

(2) All of the following elements shall be included in the public notice for public water ~~systems~~ **supplies** operating under a variance or exemption:

(a) If a public water ~~system~~ **supply** has been granted a variance or an exemption, then the public notice shall contain all of the following elements:

(i) An explanation of the reasons for the variance or exemption.

(ii) The date on which the variance or exemption was issued.

(iii) A brief status report on the steps the ~~supplier~~ **supply** is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption.

(iv) A notice of opportunities for public input in the review of the variance or exemption.

(b) If a public water ~~system~~ **supply** violates the conditions of a variance or exemption, then the public notice shall contain the 10 elements listed in subrule (1) of this rule.

(3) The public notice shall be presented in the following manner:

(a) Each public notice required by this part shall meet all of the following criteria:

(i) Shall be displayed in a conspicuous way when printed or posted.

(ii) Shall not contain overly technical language or very small print.

(iii) Shall not be formatted in a way that defeats the purpose of the notice.

(iv) Shall not contain language which nullifies the purpose of the notice.

(b) In communities where more than 10% of the consumers are non-English speaking consumers, the public notice shall contain information in the appropriate language or languages regarding the importance of the notice or contain a telephone number or address where persons served may contact the ~~supplier~~ **supply** to obtain a translated copy of the notice or to request assistance in the appropriate language.

(4) The ~~supplier~~ **supply** shall include the following standard language in the public notice:

(a) The ~~supplier~~ **supply** shall include in each public notice the health effects language specified in table 1 of this rule corresponding to each MCL, MRDL, and treatment technique violation listed in table 1 of R 325.10401a, and for each violation of a condition of a variance or exemption.

(b) The ~~supplier~~ **supply** shall include the following language in the notice, including the language necessary to fill in the blanks, for all monitoring and testing procedure violations listed in table 1 of R 325.10401a: "We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [compliance period], we 'did not monitor or test' or 'did not complete all monitoring or testing' for [contaminant or contaminants], and therefore cannot be sure of the quality of your drinking water during that time."

(c) The ~~supplier~~ **supply** shall include in the notice the following language, where applicable, to encourage the distribution of the public notice to all persons served: "Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail."

Table 1 Regulated contaminants

Key

AL=Action level
MCL=Maximum contaminant level
MCLG=Maximum contaminant level goal
mfl=Million fibers per liter
MRDL=Maximum residual disinfectant level
MRDLG=Maximum residual disinfectant level goal
mrem/year=Millirems per year (a measure of radiation absorbed by the body)
N/A=Not applicable
ntu=Nephelometric turbidity units (a measure of water clarity)
pci/l=Picocuries per liter (a measure of radioactivity)
ppm=Parts per million, or milligrams per liter (mg/l)
ppb=Parts per billion, or micrograms per liter (µg/l)
ppt=Parts per trillion, or nanograms per liter
ppq=Parts per quadrillion, or picograms per liter
TT=Treatment technique

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Microbiological contaminants						
Total coliform bacteria	MCL: For water ~~systems~~ **supplies** analyzing 40 or more samples per month, not more than 5.0% of the monthly samples may be positive for total coliform. For ~~systems~~ **supplies** analyzing fewer than 40 samples per month, not more than 1 sample per month may be positive for total coliform.			zero	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Fecal coliform and E. coli	zero	No conversion necessary	zero	zero	Human and animal fecal waste	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Fecal indicator under groundwater requirements in R 325.10612 et. al: **- E.coli** **- enterococci or** **- coliphage)**	**TT**	**No conversion necessary**	**TT**	**E.coli: zero** **Others: N/A**	**Human and animal fecal waste**	**Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.**

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Violations of rules for ground water supplies subject to R 325.10612	**TT**	**No conversion necessary**	**TT**	**N/A**	**N/A**	**Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.**
Turbidity (ntu)	TT*	No conversion necessary	TT*	N/A	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
	~~* R 325.10611b sets turbidity standards for different types of systems.~~					
Other microbiological contaminants						
Giardia lamblia, viruses, heterotrophic plate count (HPC) bacteria, legionella, cryptosporidium	TT*	No conversion necessary	TT*	zero	Naturally present in the environment	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
	* The treatment technique violations that involve turbidity exceedances may use health effects language for turbidity instead.					
Inorganic contaminants						
Antimony (ppb)	0.006	1000	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
Arsenic (ppb)	0.010*	1000	10*	0*	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
	~~* These values are effective January 23, 2006. Until then, the MCL is 0.05 mg/l and there is no MCLG.~~					

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Asbestos [fibers longer than 10 µm] (mfl)	7 mfl	No conversion necessary	7	7	Decay of asbestos cement water mains; erosion of natural deposits	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
Barium (ppm)	2	No conversion necessary	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Beryllium (ppb)	0.004	1000	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
Cadmium (ppb)	0.005	1000	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
Chromium [total] (ppb)	0.1	1000	100	100	Discharge from steel and pulp mills; erosion of natural deposits	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
Cyanide [free] (ppb)	0.2	1000	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
Fluoride (ppm)	4	No conversion necessary	4	4	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than 9 years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Mercury [inorganic] (ppb)	0.002	1000	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
Nitrate [as nitrogen] (ppm)	10	No conversion necessary	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of 6 months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Nitrite [as nitrogen] (ppm)	1	No conversion necessary	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of 6 months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Total nitrate and nitrite [as nitrogen] (ppm)	10	No conversion necessary	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of 6 months who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Selenium (ppb)	0.05	1000	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
Thallium (ppb)	0.002	1000	2	0.5	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
Lead and copper						

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Lead (ppb)	AL=0.015	1000	AL=15 (TT)	zero	Corrosion of household plumbing systems; erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Copper (ppm)	AL=1.3	No conversion necessary	AL=1.3 (TT)	1.3	Corrosion of household plumbing systems; erosion of natural deposits	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.
Synthetic organic contaminants including pesticides and herbicides						
2,4-D (ppb)	0.07	1000	70	70	Runoff from herbicide used on row crops	Some people who drink water containing the weed killer 2,4-d well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
2,4,5-TP [silvex] (ppb)	0.05	1000	50	50	Residue of banned herbicide	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
Alachlor (ppb)	0.002	1000	2	zero	Runoff from herbicide used on row crops	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
Atrazine (ppb)	0.003	1000	3	3	Runoff from herbicide used on row crops	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
Benzo(a)pyrene [PAHs] (ppt)	0.0002	1,000,000	200	zero	Leaching from linings of water storage tanks and distribution lines	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Carbofuran (ppb)	0.04	1000	40	40	Leaching of soil fumigant used on rice and alfalfa	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
Chlordane (ppb)	0.002	1000	2	zero	Residue of banned termiticide	Some people who drink water containing chlordane in excess of the mcl over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
Dalapon (ppb)	0.2	1000	200	200	Runoff from herbicide used on rights of way	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
Di(2-ethylhexyl) adipate (ppb)	0.4	1000	400	400	Discharge from chemical factories	Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience toxic effects such as weight loss, liver enlargement, or possible reproductive difficulties.
Di(2-ethylhexyl) phthalate (ppb)	0.006	1000	6	zero	Discharge from rubber and chemical factories	Some people who drink water containing di (2-ethylhexyl) phthalate well in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
Dibromochloropropane [DBCP] (ppt)	0.0002	1,000,000	200	zero	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Dinoseb (ppb)	0.007	1000	7	7	Runoff from herbicide used on soybeans and vegetables	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
Dioxin [2,3,7,8-TCDD] (ppq)	0.00000003	1,000,000,000	30	zero	Emissions from waste incineration and other combustion; discharge from chemical factories	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Diquat (ppb)	0.02	1000	20	20	Runoff from herbicide use	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
Endothall (ppb)	0.1	1000	100	100	Runoff from herbicide use	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Endrin (ppb)	0.002	1000	2	2	Residue of banned insecticide	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
Ethylene dibromide (ppt)	0.00005	1,000,000	50	zero	Discharge from petroleum refineries	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
Glyphosate (ppb)	0.7	1000	700	700	Runoff from herbicide use	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
Heptachlor (ppt)	0.0004	1,000,000	400	zero	Residue of banned pesticide	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
Heptachlor epoxide (ppt)	0.0002	1,000,000	200	zero	Breakdown of heptachlor	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
Hexachlorobenzene (ppb)	0.001	1000	1	zero	Discharge from metal refineries and agricultural chemical factories	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
Hexachlorocyclopentadiene (ppb)	0.05	1000	50	50	Discharge from chemical factories	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
lindane (ppt)	0.0002	1,000,000	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
Methoxychlor (ppb)	0.04	1000	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Oxamyl [vydate] (ppb)	0.2	1000	200	200	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
Pentachlorophenol (ppb)	0.001	1000	1	zero	Discharge from wood preserving factories	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
Picloram (ppb)	0.5	1000	500	500	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
Polychlorinated biphenyls [PCBs] (ppt)	0.0005	1,000,000	500	zero	Runoff from landfills; discharge of waste chemicals	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
Simazine (ppb)	0.004	1000	4	4	Herbicide runoff	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
Toxaphene (ppb)	0.003	1000	3	zero	Runoff/leaching from insecticide used on cotton and cattle	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.
Volatile organic contaminants						
Benzene (ppb)	0.005	1000	5	zero	Discharge from factories; leaching from gas storage tanks and landfills	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
Carbon tetrachloride (ppb)	0.005	1000	5	zero	Discharge from chemical plants and other industrial activities	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Chlorobenzene (ppb)	0.1	1000	100	100	Discharge from chemical and agricultural chemical factories	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
O-dichlorobenzene (ppb)	0.6	1000	600	600	Discharge from industrial chemical factories	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
P-dichlorobenzene (ppb)	0.075	1000	75	75	Discharge from industrial chemical factories	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
1,2-dichloroethane (ppb)	0.005	1000	5	zero	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
1,1-dichloroethylene (ppb)	0.007	1000	7	7	Discharge from industrial chemical factories	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
Cis-1,2-dichloroethylene (ppb)	0.07	1000	70	70	Discharge from industrial chemical factories	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
Trans-1,2-dichloroethylene (ppb)	0.1	1000	100	100	Discharge from industrial chemical factories	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
Dichloromethane (ppb)	0.005	1000	5	zero	Discharge from pharmaceutical and chemical factories	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
1,2-dichloropropane (ppb)	0.005	1000	5	zero	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
Ethylbenzene (ppb)	0.7	1000	700	700	Discharge from petroleum refineries	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
Styrene (ppb)	0.1	1000	100	100	Discharge from rubber and plastic factories; leaching from landfills	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
Tetrachloro-ethylene (ppb)	0.005	1000	5	Zero	Discharge from factories and dry cleaners	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Toluene (ppm)	1	No conversion necessary	1	1	Discharge from petroleum factories	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
1,2,4-trichlorobenzene (ppb)	0.07	1000	70	70	Discharge from textile-finishing factories	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
1,1,1-trichloroethane (ppb)	0.2	1000	200	200	Discharge from metal degreasing sites and other factories	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
1,1,2-trichloroethane (ppb)	0.005	1000	5	3	Discharge from industrial chemical factories	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
Trichloroethylene (ppb)	0.005	1000	5	zero	Discharge from metal degreasing sites and other factories	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Vinyl chloride (ppb)	0.002	1000	2	zero	Leaching from PVC piping; discharge from plastics factories	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
Xylenes [total] (ppm)	10	No conversion necessary	10	10	Discharge from petroleum factories; discharge from chemical factories	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.
Radioactive contaminants						
Beta/photon emitters (mrem/yr)	4 mrem/yr	No conversion necessary	4	zero	Decay of natural and man-made deposits	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer.
Alpha emitters [gross alpha] (pci/l)	15 pCi/L	No conversion necessary	15	zero	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Combined radium [226 & 228] (pci/l)	5 pCi/L	No conversion necessary	5	zero	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium (pCi/L)	30 ug/L	No conversion necessary	30	Zero	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
Disinfection byproducts (DBP), byproduct precursors, and disinfectant residuals: where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBP). The department sets standards for controlling the levels of disinfectants and DBP in drinking water, including trihalomethanes (THM) and haloacetic acids (HAA). See R 325.10610~~, R 325.10610a,~~ **to R 325.10610d** and R 325.10719e **to R 325.10719n** for disinfection byproduct MCLs, disinfectant MRDLs, and related monitoring requirements.						
Total trihalomethanes [TTHM] (ppb)	~~0.10/~~ 0.080*	1000	~~100/~~80*	N/A	By-product of drinking water disinfection	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.
	* The MCL for total trihalomethanes is the sum of the concentrations of the individual trihalomethanes. ~~Different MCLs for TTHM apply to different types of systems. See the footnote in R 325.10610(1).~~					
Haloacetic acids (HAAs) (ppb)	0.060*	1000	60*	N/A	By-product of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
	* The MCL for haloacetic acids is the sum of the concentrations of the individual haloacetic acids.					
Bromate (ppb)	0.010	1000	10	zero	By-product of drinking water disinfection	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
Chloramines (ppm)	MRDL = 4	No conversion necessary	MRDL = 4	MRDLG = 4	Water additive used to control microbes	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
Chlorine (ppm)	MRDL = 4	No conversion necessary	MRDL = 4	MRDLG = 4	Water additive used to control microbes	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Chlorite (ppm)	1	No conversion necessary	1	0.8	By-product of drinking water disinfection	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
Chlorine dioxide (ppb)	MRDL = 0.8	1000	MRDL = 800	MRDLG = 800	Water additive used to control microbes	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
	Add the following only to public notification where any 2 consecutive daily samples taken at the entrance to the distribution system are above the MRDL: "The chlorine dioxide violations reported today are the result of exceedances at the treatment facility only, not within the distribution system which delivers water to consumers. Continued compliance with chlorine dioxide levels within the distribution system minimizes the potential risk of these violations to consumers." Add the following only to public notification where one or more distribution system samples are above the MRDL: "The chlorine dioxide violations reported today include exceedances of the drinking water standard within the distribution system which delivers water to consumers. Violations of the chlorine dioxide standard within the distribution system may harm human health based on short-term exposures. Certain groups, including fetuses, infants, and young children, may be especially susceptible to nervous system effects from excessive chlorine dioxide exposure."					
Total organic carbon [TOC - control of DBP precursors] (ppm)	TT	No conversion necessary	TT	None	Naturally present in the environment	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THM) and haloacetic acids (HAA). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
Other treatment techniques						
Acrylamide	TT	No conversion necessary	TT	zero	Added to water during sewage/ wastewater treatment	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Epichlorohydrin	TT	No conversion necessary	TT	zero	Discharge from industrial chemical factories; an impurity of some water treatment chemicals	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

R 325.10406 Notice to new billing units or new customers.

Rule 406. (1) ~~Suppliers of community water systems~~ **Community water supplies** shall give a copy of the most recent public notice for continuing violations, the existence of a variance or exemption, or other ongoing situations requiring a public notice to all new billing units or new customers before or at the time service begins.

(2) ~~Suppliers of noncommunity water systems~~ **Noncommunity water supplies** shall continuously post the public notice in conspicuous locations in order to inform new consumers of continuing violations, variance or exemption, or other situation requiring a public notice for as long as the violation, variance, exemption, or other situation exists.

R 325.10407 Special notice of the availability of unregulated contaminant monitoring results.

Rule 407. (1) ~~The supplier of a~~ **A** community ~~water system~~ or nontransient, noncommunity water ~~system~~ **supply** required to monitor under ~~R 325.10717b(1)~~ **40 CFR 141.40, as referenced in R 325.10401a,** shall notify persons served by the ~~system~~ **water supply** of the availability of the results of such sampling not later than 12 months after the monitoring results are known.

(2) The form and manner of the public notice shall follow the requirements for a tier 3 public notice under R 325.10404(3), (4)(a) and (c). The notice shall also identify a person and provide the telephone number to contact for information on the monitoring results.

R 325.10408 Periodic progress reports; correction of violations and notification of customers.

Rule 408. The department may require a ~~supplier of a~~ public water ~~system~~ **supply** to submit periodic reports on progress being made to correct a violation of an MCL, order, or a variance or exemption, and to notify the persons served by the ~~system~~ **public water supply** of that progress.

R 325.10408b Special notice for nitrate exceedances above MCL by noncommunity water ~~systems~~ **supplies** (NCWS); permission granted by department.

Rule 408b. (1) ~~The supplier of a~~ **A** noncommunity water ~~system~~ **supply** granted permission by the department under R 325.10604c(3) to exceed the nitrate MCL shall provide notice to persons served according to the requirements for a tier 1 notice under R 325.10402(1) and (2).

(2) ~~Noncommunity water systems~~ **A noncommunity water supply** granted permission by the department to exceed the nitrate MCL under R 325.10604c(3) shall provide continuous posting of the fact that nitrate levels exceed 10 mg/l and the potential health effects of exposure, according to the requirements for tier 1 notice delivery under R 325.10402(3) and the content requirements under R 325.10405.

R 325.10408c Special notice to the public of significant deficiencies or source water fecal contamination.

Rule 408c. (1) A community groundwater supply that receives notice from the department under R 325.10612a of a significant deficiency or notification of a fecal indicator-positive groundwater source sample that is not invalidated by the department under R 325.10739(3) shall inform the public served by the water supply under R 325.10413(11)(f) of the fecal indicator-positive source sample or of any significant deficiency that has not been corrected. The community groundwater supply shall continue to inform the public annually until the

significant deficiency is corrected or the fecal contamination in the groundwater source is determined by the department to be corrected under R 325.10612a(1)(e).

(2) A noncommunity groundwater supply that receives notice from the department under R 325.10612a of a significant deficiency shall inform the public served by the water supply in a manner approved by the department of any significant deficiency that has not been corrected within 12 months of being notified by the department, or earlier if directed by the department. The noncommunity groundwater supply shall continue to inform the public annually until the significant deficiency is corrected. The information shall include all of the following:

(a) The nature of the significant deficiency and the date the significant deficiency was identified by the department.

(b) The department-approved plan and schedule for correction of the significant deficiency, including interim measures, progress to date, and any interim measures completed.

(c) For noncommunity groundwater supplies serving a population with more than 10% non-English speaking consumers, information in the appropriate language or languages regarding the importance of the notice or a telephone number or address where consumers may contact the supply to obtain a translated copy of the notice or assistance in the appropriate language.

(3) If directed by the department, a noncommunity water supply with significant deficiencies that have been corrected shall inform its customers of the significant deficiencies, how the deficiencies were corrected, and the dates of correction under subrule (2) of this rule.

R 325.10408d Special notice for repeated failure to conduct monitoring of the source water for Cryptosporidium and for failure to determine bin classification or mean Cryptosporidium level.

Rule 408d. (1) A community or noncommunity water supply that is required to monitor source water under 40 CFR 141.701, as adopted by reference in R 325.10720b, shall notify persons served by the water supply that monitoring has not been completed as specified no later than 30 days after the supply has failed to collect any 3 months of monitoring as specified in 40 CFR 141.701(c). The notice shall be repeated as specified in R 325.10403(2).

(2) A community or noncommunity water supply that is required to determine a bin classification under R 325.10611e shall notify persons served by the water supply that the determination has not been made as required no later than 30 days after the supply has failed to report the determination as specified in R 325.10611e(5). The notice shall be repeated as specified in R 325.10403(2). The notice is not required if the supply is complying with a department-approved schedule to address the violation.

(3) The form and manner of the public notice shall follow the requirements for a Tier 2 public notice prescribed in R 325.10403(3). The public notice shall be presented as required in R 325.10405(3).

(4) The notice shall contain the following language, including the language necessary to fill in the blanks:

(a) The special notice for repeated failure to conduct monitoring shall contain the following language: "We are required to monitor the source of your drinking water for Cryptosporidium. Results of the monitoring are to be used to determine whether water treatment at the [treatment plant name] is sufficient to adequately remove Cryptosporidium from your drinking water. We are required to complete

this monitoring and make this determination by [required bin determination date]. We 'did not monitor or test' or 'did not complete all monitoring or testing' on schedule and, therefore, we may not be able to determine by the required date what treatment modifications, if any, shall be made to ensure adequate Cryptosporidium removal. Missing this deadline may, in turn, jeopardize our ability to have the required treatment modifications, if any, completed by the deadline required, [date]. For more information, please call [name of water supply contact] of [name of water supply] at [phone number]."

(b) The special notice for failure to determine bin classification or mean Cryptosporidium level shall contain the following language: "We are required to monitor the source of your drinking water for Cryptosporidium in order to determine by [date] whether water treatment at the [treatment plant name] is sufficient to adequately remove Cryptosporidium from your drinking water. We have not made this determination by the required date. Our failure to do this may jeopardize our ability to have the required treatment modifications, if any, completed by the required deadline of [date]. For more information, please call [name of water supply contact] of [name of water supply] at [phone number]."

(c) Each special notice shall also include a description of what the water supply is doing to correct the violation and when the supply expects to return to compliance or resolve the situation.

R 325.10409 Notice by department on behalf of the public water system.

Rule 409. (1) The department may give the notice required by this part on behalf of the ~~supplier of the~~ public water ~~system~~ **supply** if the department complies with the requirements of this part and may charge costs incurred by the department to the ~~owner of the~~ public water supply.

(2) The ~~supplier of the~~ public water ~~system~~ **supply** shall ensure that the requirements of this part are met.

R 325.10410 Public education regarding lead.

Rule 410. (1) **Each community and noncommunity water supply that monitors for lead under R 325.10710a shall deliver a consumer notice of lead tap water monitoring results to persons served by the water supply at sites that are tested, as specified in subrule (5) of this rule. A community or noncommunity water supply is also considered "water supply" or "supply" in this rule.** ~~If a community water system or a nontransient noncommunity water system~~ **A water supply that** exceeds the lead action level based on tap water samples that are collected under R 325.10710a~~, then the supplier~~ shall deliver the public education materials ~~specified in 40 C.F.R. §§141.85(a) and (b), (January 26, 2000), which are adopted by reference. The adopted material is available from the Superintendent of Documents at the address in R 325.10116(b) for a cost of $47.00 at the time of adoption of these rules. The adopted material is available for inspection, or copies are available at no cost from the offices of the department at the address in R 325.10116(a)~~ **contained in subrule (2) of this rule under the requirements in subrule (3) of this rule**. **A water supply that exceeds the lead action level shall offer to arrange for sampling the tap water of a customer who requests sampling under subrule (4) of this rule. The supply is not required to pay for collecting or analyzing the sample and is not required to collect and analyze the sample.**

(2) ~~In a community where more than 10% of the population speaks a language other than English, public education materials shall be communicated in the appropriate~~

~~language or languages.~~ **Both of the following apply to the content of written public education materials:**

(a) Water supplies shall include the following elements in printed materials, for example, brochures and pamphlets, in the same order as listed below. In addition, language in paragraphs (i) to (ii) and (vi) of this subdivision shall be included in the materials, exactly as written, except for the text in brackets in these paragraphs for which the water supply shall include supply-specific information. Any additional information presented by a water supply shall be consistent with the information below and be in plain language that can be understood by the general public. Water supplies shall submit all written public education materials to the department prior to delivery. The department may require the supply to obtain approval of the content of written public materials prior to delivery.

(i) IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER. [INSERT NAME OF WATER SUPPLY] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.

(ii) Health effects of lead. Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother's bones, which may affect brain development.

(iii) Sources of Lead.

(A) Explain what lead is.

(B) Explain possible sources of lead in drinking water and how lead enters drinking water. Include information on home/building plumbing materials and service lines that may contain lead.

(C) Discuss other important sources of lead exposure in addition to drinking water, for example, paint.

(iv) Discuss the steps the consumer can take to reduce their exposure to lead in drinking water.

(A) Encourage running the water to flush out the lead.

(B) Explain concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula.

(C) Explain that boiling water does not reduce lead levels.

(D) Discuss other options consumers can take to reduce exposure to lead in drinking water, such as alternative sources or treatment of water.

(E) Suggest that parents have their child's blood tested for lead.

(v) Explain why there are elevated levels of lead in the supply's drinking water, if known, and what the water supply is doing to reduce the lead levels in homes/buildings in this area.

(vi) For more information, call us at [INSERT YOUR NUMBER] [(IF APPLICABLE), or visit our Web site at [INSERT YOUR WEB SITE HERE]]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at http://www.epa.gov/lead or contact your health care provider.

(b) In addition to including the elements specified in subdivision (a) of this subrule, community water supplies shall:

(i) Tell consumers how to get their water tested.

(ii) Discuss lead in plumbing components and the difference between low lead and lead free.

(3) ~~The supplier of a community water system that exceeds the lead action level on the basis of tap water samples collected under R 325.10710a, and that is not already repeating public education tasks pursuant to subrules (4), (8), and (9) of this rule, shall, within 60 days, do all of the following:~~ **All of the following provisions apply to delivery of public education materials:**

(a) ~~Insert notices in each customer's water utility bill containing the information specified in 40 C.F.R. §141.85(a)(1), together with the following alert on the water bill itself in large print: "Some homes in this community have elevated lead levels in their drinking water. Lead can pose a significant risk to your health. Please read the enclosed notice for further information." The supplier of a community water system having a billing cycle that does not include a billing within 60 days of exceeding the action level, or that cannot insert information in the water utility bill without making major changes to its billing system, may use a separate mailing to deliver the information in 40 C.F.R. §141.85(a)(1), as adopted by reference in subrule (1) of this rule, as long as the information is delivered to each customer within 60 days of exceeding the action level. The supplier shall also include the "alert" language specified in this subdivision.~~ **For public water supplies serving communities that have more than 10% non-English speaking consumers, the public education materials shall contain information in the appropriate language or languages regarding the importance of the notice or contain a telephone number or address where persons served may contact the water supply to obtain a translated copy of the public education materials or to request assistance in the appropriate language.**

(b) ~~Submit the information specified in 40 C.F.R. §141.85(a)(1), as adopted by reference in subrule (1) of this rule, to the editorial departments of the major daily and weekly newspapers circulated throughout the community.~~ **A community water supply that exceeds the lead action level on the basis of tap water samples collected under R 325.10710a, and that is not already conducting public education tasks under this rule, shall conduct the public education tasks under this rule within 60 days after the end of the monitoring period in which the exceedance occurred:**

(i) Deliver printed materials meeting the content requirements of subrule (2) of this rule to all bill paying customers.

(ii) All of the following provisions apply to contacting at risk customers:

(A) Contact customers who are most at risk by delivering education materials that meet the content requirements of subrule (2) of this rule to local public health agencies even if they are not located within the water supply's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or community water supply's users. The water supply shall contact the local public health agencies directly by phone or in person. The local public health agencies may provide a specific list of additional community based organizations serving target populations, which may include organizations outside the service area of the water supply. If lists are provided, supplies shall deliver education materials that meet the content requirements of subrule (2) of this rule to all organizations on the provided lists.

(B) Contact customers who are most at risk by delivering materials that meet the content requirements of subrule (2) of this rule to all of the following organizations that are located within the water supply's service area, along with

an informational notice that encourages distribution to all the organization's potentially affected customers or community water supply's users:

(1) Public and private schools or school boards.

(2) Women, Infants and Children (WIC) and Head Start programs.

(3) Public and private hospitals and medical clinics.

(4) Pediatricians.

(5) Family planning clinics.

(6) Local welfare agencies.

(C) Make a good faith effort to locate all of the following organizations within the service area and deliver materials that meet the content requirements of subrule (2) of this rule to them, along with an informational notice that encourages distribution to all potentially affected customers or users. The good faith effort to contact at-risk customers may include requesting a specific contact list of these organizations from the local public health agencies, even if the agencies are not located within the water supply's service area:

(1) Licensed childcare centers

(2) Public and private preschools.

(3) Obstetricians-Gynecologists and Midwives.

(iii) Not less often than quarterly, provide information on or in each water bill as long as the supply exceeds the action level for lead. The message on the water bill shall include the following statement exactly as written except for the text in brackets for which the water supply shall include supply-specific information: [INSERT NAME OF WATER SUPPLY] found high levels of lead in drinking water in some homes. Lead can cause serious health problems. For more information please call [INSERT NAME OF WATER SUPPLY] [or visit (INSERT YOUR WEB SITE HERE)]. The message or delivery mechanism can be modified in consultation with the department; specifically, the department may allow a separate mailing of public education materials to customers if the water supply cannot place the information on water bills.

(iv) Post material meeting the content requirements of subrule (2) of this rule on the water supply's Web site if the supply serves a population greater than 100,000.

(v) Submit a press release to newspaper, television and radio stations.

(vi) In addition to subdivision (i) to (v) of this subrule, supplies shall implement not fewer than 3 activities from 1 or more categories listed below. The educational content and selection of these activities shall be determined in consultation with the department.

(A) Public Service Announcements.

(B) Paid advertisements.

(C) Public Area Information Displays.

(D) E-mails to customers.

(E) Public Meetings.

(F) Household Deliveries.

(G) Targeted Individual Customer Contact.

(H) Direct material distribution to all multi-family homes and institutions.

(I) Other methods approved by the department.

(vii) For supplies that are required to conduct monitoring annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or, if the department has established an alternate monitoring period, the last day of that period.

(c) ~~Deliver pamphlets or brochures, or both, that contain the public education materials specified in 40 C.F.R. §§141.85(a)(1)(ii) and (iv), as adopted by reference in subrule (1) of this rule, to facilities and organizations, including all of the following:~~

~~(i) Public schools or local school boards.~~

~~(ii) City or county health department.~~

~~(iii) Women, infants, and children (WIC), or head start programs.~~

~~(iv) Public and private hospitals or clinics.~~

~~(v) Pediatricians.~~

~~(vi) Family planning clinics.~~

~~(vii) Local welfare agencies.~~ **As long as a community water supply exceeds the action level, it shall repeat the activities under subdivision (b) of this subrule as described in all of the following, as applicable:**

(i) A community water supply shall repeat the education materials delivery tasks contained in subdivision (b)(i) to (ii) and repeat the additional activities tasks contained in subdivision (b)(vi) of this subrule every 12 months.

(ii) A community water supply shall repeat the water bill information tasks contained in subdivision (b)(iii) of this subrule with each billing cycle.

(iii) A community water supply serving a population greater than 100,000 shall post and retain material on a publicly accessible Web site under subdivision (b)(iv) of this subrule.

(iv) The community water supply shall repeat the press release task in subdivision (b)(v) of this subrule twice every 12 months on a schedule agreed upon with the department. The department can allow activities in subdivision (b) of this subrule to extend beyond the 60-day requirement if needed for implementation purposes on a case-by-case basis; however, this extension shall be approved in writing by the department in advance of the 60-day deadline.

(d) ~~Submit the public service announcement specified in 40 C.F.R. §141.85(b), as adopted by reference in subrule (1) of this rule, to not fewer than 5 of the radio and television stations with the largest audiences that broadcast to the community that is served by the system. For small water systems, the public service announcement may be hand delivered to each customer instead of submitting the announcement to radio and television stations.~~ **Within 60 days after the end of the monitoring period in which the exceedance occurred, unless it already is repeating public education tasks under subdivision (e) of this subrule, a nontransient noncommunity water supply shall deliver the public education materials specified by subrule (2) of this rule under all of the following provisions:**

(i) Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the supply.

(ii) Distribute informational pamphlets, or brochures, or both, on lead in drinking water to each person served by the nontransient noncommunity water supply. The department may allow the supply to utilize electronic transmission instead of or combined with printed materials as long as it achieves at least the same coverage.

(iii) For supplies that are required to conduct monitoring annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or, if the department has established an alternate monitoring period, the last day of that period.

(e) A nontransient noncommunity water supply shall repeat the posting and distributing tasks contained in subdivision (d) of this subrule at least once during each calendar year in which the supply exceeds the lead action level. The department can allow activities in subdivision (d) of this subrule to extend beyond

the 60-day requirement if needed for implementation purposes on a case-by-case basis; however, this extension shall be approved in writing by the department in advance of the 60-day deadline.

(f) A water supply may discontinue delivery of public education materials if the supply has met the lead action level during the most recent 6-month monitoring period conducted under R 325.10710a. The supply shall recommence public education under this rule if it subsequently exceeds the lead action level during a monitoring period.

(g) A community water supply may apply to the department, in writing, unless the department has waived the requirement for prior department approval, to use only the text specified in subrule (2)(a) of this rule instead of the text in subrule (2)(a) to (b) of this rule and to perform the tasks listed in subdivision (d) to (e) of this subrule instead of the tasks in subdivision (b) to (c) of this subrule if both of the following conditions exist:

(i) The supply is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices.

(ii) The supply provides water as part of the cost of services provided and does not separately charge for water consumption.

(h) A community water supply serving 3,300 or fewer people may limit certain aspects of their public education programs as follows:

(i) With respect to the requirements of subdivision (b)(vi) of this subrule, a supply serving 3,300 or fewer shall implement at least 1 of the activities listed in that paragraph.

(ii) With respect to the requirements of subdivision (b)(ii) of this subrule, a supply serving 3,300 or fewer people may limit the distribution of the public education materials required under that subdivision to facilities and organizations served by the supply that are most likely to be visited regularly by pregnant women and children.

(iii) With respect to the requirements of subdivision (b)(v) of this subrule, the department may waive this requirement for supplies serving 3,300 or fewer persons as long as supply distributes notices to every household served by the supply.

(4) ~~The supplier of a community water system shall repeat the tasks specified in subrule (3)(a), (b), and (c) of this rule every 12 months and the tasks specified in subrule (3)(d) of this rule every 6 months for as long as the system exceeds the lead action level.~~ **A water supply that fails to meet the lead action level based on tap samples collected under R 325.10710a shall offer to arrange for sampling the tap water of a customer who requests sampling. The supply is not required to pay for collecting or analyzing the sample and is not required to collect and analyze the sample.**

(5) ~~Within 60 days after a nontransient, noncommunity water system exceeds the lead action level, unless the supplier is already repeating public education tasks pursuant to subrule (6) of this rule, the supplier shall deliver the public education materials specified in the applicable provisions of 40 C.F.R. §141.85(a)(1), as adopted by reference in subrule (1) of this rule, or the public education materials specified by 40 C.F.R. §141.85(a)(2), as follows:~~

~~(a) Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the system.~~

~~(b) Distribute informational pamphlets or brochures, or both, on lead in drinking water to each person who is served by the nontransient, noncommunity water system. The department may allow the supplier to utilize electronic transmission instead of or~~

~~combined with printed materials as long as it achieves at least the same coverage.~~ **All of the following provisions apply to notification of results:**

(a) Each supply shall provide a notice of the individual tap results from lead tap water monitoring carried out under R 325.10710a to the persons served by the supply at the specific sampling site from which the sample was taken, for example, the occupants of the residence where the tap was tested.

(b) A supply shall provide the consumer notice as soon as practical, but not later than 30 days after the supply learns of the tap monitoring results.

(c) The consumer notice shall include the results of lead tap water monitoring for the tap that was tested, an explanation of the health effects of lead, list steps consumers can take to reduce exposure to lead in drinking water and contact information for the water utility. The notice shall also provide the maximum contaminant level goal and the action level for lead and the definitions for these 2 terms from R 325.10413(4) and (6).

(d)The consumer notice shall be provided to persons served at the tap that was tested, either by mail or by another method approved by the department. For example, upon approval by the department, a non- transient non-community water supply could post the results on a bulletin board in the facility to allow users to review the information. The supply shall provide the notice to customers at sample taps tested, including consumers who do not receive water bills.

~~(6) The supplier of a nontransient, noncommunity water system shall repeat the tasks specified in subrule (5) of this rule at least once during each calendar year in which the system exceeds the lead action level.~~

~~(7) A supplier may discontinue delivery of public education materials if the system subject to this rule has met the lead action level during the most recent 6 month monitoring period conducted under R 325.10710a. The supplier shall recommence public education under this rule if it subsequently exceeds the lead action level during a monitoring period.~~

~~(8) The supplier of a community water system may apply to the department, in writing, unless the department has waived the requirement for prior department approval, to use the text specified in 40 C.F.R. §141.85(a)(2), as adopted by reference in subrule (1) of this rule, instead of the text in 40 C.F.R. §141.85(a)(1) and to perform the tasks listed in subrules (5) and (6) of this rule instead of the tasks in subrules (3) and (4) of this rule if both of the following provisions are satisfied:~~

~~(a) The system is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices.~~

~~(b) The supplier provides water as part of the cost of services provided and does not separately charge for water consumption.~~

~~(9) Both of the following provisions apply to community water supplies serving 3,300 or fewer people:~~

~~(a) If a community water system serves 3,300 or fewer people, then the supplier may omit the task contained in subrule (3)(d) of this rule. As long as it distributes notices containing the information contained in 40 C.F.R §141.85(a)(1), as adopted by reference in subrule (1) of this rule, to every household served by the system, those suppliers may further limit their public education programs as follows:~~

~~(i) If a system serves 500 or fewer people, then the supplier may forego the task contained in subrule (3)(b) of this rule. The supplier may limit the distribution of the public education materials required under subrule (3)(c) of this rule to facilities and organizations served by the system that are most likely to be visited regularly by~~

~~pregnant women and children, unless it is notified by the department, in writing, that it shall make a broader distribution.~~

~~(ii) If a system serves 501 to 3,300 people, then the supplier, if approved by the department in writing, may omit the task in subrule (3)(b) of this rule or limit the distribution of the public education materials required under subrule (3)(c) of this rule to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children, or may do both.~~

~~(b) The supplier of a community water system serving 3,300 or fewer people that delivers public education under subdivision (a)(i) of this subrule shall repeat the required public education tasks at least once during each calendar year in which the system exceeds the lead action level.~~

R 325.10411 Annual consumer confidence reporting; purpose; applicability.

Rule 411. (1) R 325.10411 to R 325.10415 establish the minimum requirements for the content, recordkeeping, and delivery of annual consumer confidence reports that ~~suppliers of~~ community water ~~systems~~ **supplies** shall prepare and deliver to their customers. These reports shall contain information on the quality of the water delivered by the supplie~~r~~s and characterize the risks, if any, from exposure to contaminants detected in the drinking water in an accurate and understandable manner.

(2) R 325.10411 to R 325.10415 apply only to community **water** supplies. **Community water supplies are also considered "water supplies" or "supplies" in R 325.10411 to R 325.10415.**

(3) For the purpose of R 325.10411 to R 325.10415, "report" means annual consumer confidence report.

(4) For the purpose of R 325.10411 to R 325.10415, "customers" are defined as billing units or service connections to which water is delivered by the ~~supplier of a~~ community water ~~system~~ **supply**.

(5) For the purpose of R 325.10411 to R 325.10420, "detected" means at or above the levels prescribed by R 325.10605.

R 325.10412 Annual consumer confidence reporting; effective dates.

Rule 412. (1) ~~The supplier of each~~ **Each** existing community water system shall deliver its report by July 1 annually. Each report shall contain data collected during, or before, the previous calendar year.

(2) The supplier of a new community water system shall deliver its first report by July 1 of the year after its first full calendar year in operation and then by July 1 annually.

(3) ~~The supplier of a~~ **A** community water ~~system~~ **supply** that sells water to another community water ~~system~~ **supply** shall deliver the applicable information required in R 325.10413 to the buyer ~~system~~ **water supply** by either of the following dates:

(a) April 1 annually.

(b) A date mutually agreed upon by the seller and the purchaser, and specifically included in a contract between the parties.

R 325.10413 Annual consumer confidence reporting; content of reports.

Rule 413. (1) ~~The supplier of e~~**E**ach community water ~~system~~ **supply** shall provide to its customers an annual report that contains the information specified in this rule and the information specified in R 325.10414.

(2) Each report shall identify the source or sources of the water delivered by the community water ~~system~~ **supply** by providing information on both of the following:

(a) The type of the water; for example, surface water or ground water.

(b) The commonly used name, if any, and location of the body or bodies of water.

(3) If a source water assessment has been completed, then the report shall notify consumers of the availability of the information and the means to obtain it. In addition, a community supply is encouraged to highlight in the report significant sources of contamination in the source water area if the supply has readily available information. If a ~~supplier~~ **supply** has received a source water assessment from the department, then the report shall include a brief summary of the ~~system's~~ **supply's** susceptibility to potential sources of contamination, using language provided by the department or written by the operator.

(4) Each report shall include both of the following definitions:

(a) "Maximum Contaminant Level Goal" or "MCLG" means the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

(b) "Maximum Contaminant Level" or "MCL" means the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

(5) A report for a community water ~~system~~ **supply** operating under a variance or an exemption issued under section 20 of the act shall include the definition for variances and exemptions. "Variances and exemptions" means state or EPA permission not to meet an MCL or a treatment technique under certain conditions.

(6) A report that contains data on regulated contaminants using any of the following terms shall include the applicable definitions:

(a) "Treatment technique" or "TT" means a required process intended to reduce the level of a contaminant in drinking water.

(b) "Action level" or "AL" means the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water supply shall follow.

(c) "Maximum residual disinfectant level goal" or "MRDLG" means the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

(d) "Maximum residual disinfectant level" or "MRDL" means the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

(7) The report shall include all of the following information on detected contaminants subject to mandatory monitoring, except Cryptosporidium:

(a) This subrule applies to all of the following contaminants:

(i) Contaminants subject to an MCL, action level, maximum residual disinfectant level, or treatment technique known as regulated contaminants.

(ii) Contaminants for which monitoring is required by ~~R 325.10717b(1)~~ **40 CFR 141.40, as referenced in R 325.10401a,** known as unregulated contaminants.

(iii) Disinfection by products or microbial contaminants for which monitoring is required by 40 C.F.R. §§141.142 and 141.143, except as provided under subrule (8)(a) of this rule, and which are detected in the finished water.

(b) The data relating to the contaminants specified in this subrule shall be displayed in 1 table or in several adjacent tables. Any additional monitoring results that a community supply chooses to include in its report shall be displayed separately.

(c) The data shall be derived from data collected to comply with EPA and state monitoring and analytical requirements during the previous calendar year with the following exceptions:

(i) If a ~~supplier~~ **supply** is allowed to monitor for regulated contaminants less often than once a year, then the table or tables shall include the date and results of the most recent sampling and the report shall include a brief statement indicating that the data

presented in the report are from the most recent testing done in accordance with the regulations. Data older than 5 years need not be included.

(ii) Results of monitoring in compliance with 40 C.F.R. §§141.142 and 141.143 need only be included for 5 years from the date of last sample or until any of the detected contaminants becomes regulated and subject to routine monitoring requirements, whichever comes first.

(d) For detected regulated contaminants in table 1 of R 325.10405, the table or tables shall contain all of the following information:

(i) The MCL for that contaminant expressed as a number equal to or greater than 1.0, as provided in table 1 of R 325.10405.

(ii) The MCLG for that contaminant expressed in the same units as the MCL.

(iii) If there is not an MCL for a detected contaminant, then the table shall indicate that there is a treatment technique, or specify the action level, applicable to that contaminant. The report shall also include the definitions for treatment technique or action level, or both, as appropriate, and specified in subrule (6) of this rule.

(iv) For contaminants subject to an MCL, except turbidity and total coliforms, the table shall indicate the highest contaminant level used to determine compliance with a drinking water standard and the range of detected levels as follows:

(A) If compliance with the MCL is determined annually or less frequently, then the table shall indicate the highest detected level at any sampling point and the range of detected levels expressed in the same units as the MCL.

(B) If compliance with the MCL is determined by calculating a running annual average of all samples taken at a sampling point, then the table shall indicate the highest average of any of the sampling points and the range of all sampling points expressed in the same units as the MCL. **For the MCLs for TTHM and HAA5 in R 325.10610(2) that are based on a locational running annual average, supplies shall include the highest locational running annual average for TTHM and HAA5 and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. If more than one location exceeds the TTHM or HAA5 MCL, the supply shall include the locational running annual averages for all locations that exceed the MCL.**

(C) If compliance with the MCL is determined on a supply wide basis by calculating a running annual average of all samples at all sampling points, then the table shall indicate the average and range of detection expressed in the same units as the MCL. **The supply is required to include individual sample results for the IDSE conducted under R 325.10719g when determining the range of TTHM and HAA5 results to be reported in the annual consumer confidence report for the calendar year that the IDSE samples were taken.**

Note to subdivision (d)(iv) of this subrule: When rounding of results to determine compliance with the MCL is allowed, rounding may be done before multiplying the results by the factor listed in table 1 of R 325.10405.

(v) For turbidity reported ~~pursuant to~~ **under** R 325.10720 and R 325.10611b, the table shall indicate the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits for the filtration technology being used. The report shall include an explanation of the reasons for measuring turbidity.

(vi) For lead and copper, the table shall indicate the ninetieth percentile value of the most recent round of sampling and the number of sampling sites exceeding the action level.

(vii) For total coliform, the table shall indicate either of the following:

(A) The highest monthly number of positive samples for supplies collecting fewer than 40 samples per month.

(B) The highest monthly percentage of positive samples for supplies collecting not less than 40 samples per month.

(viii) For fecal coliform, the table shall indicate the total number of positive samples.

(ix) The table shall indicate the likely source or sources of detected contaminants to the best of the ~~supplier's~~ **supply's** knowledge. Specific information regarding contaminants may be available in sanitary surveys and source water assessments and the ~~supplier~~ **supply** shall use the information when it is available. If the ~~supplier~~ **supply** lacks specific information on the likely source, then the report shall include 1 or more of the typical sources for that contaminant listed in table 1 of R 325.10405 that are most applicable to the community water ~~system~~ **supply**.

(e) If a community water ~~system~~ **supply** distributes water to its customers from multiple hydraulically independent distribution systems that are fed by different raw water sources, then the table may contain a separate column for each service area and the report may identify each separate distribution system. Alternatively, supplier~~s~~ may produce separate reports tailored to include data for each service area.

(f) The table or tables shall clearly identify any data indicating violations of MCLs, MRDLs, or treatment techniques and the report shall contain a clear and readily understandable explanation of the violation including the length of the violation, the potential adverse health effects, and actions taken by the ~~supplier~~ **supply** to address the violation. The ~~supplier~~ **supply** shall use the relevant language in table 1 of R 325.10405 to describe the potential health effects.

(g) For detected unregulated contaminants for which monitoring is required, except Cryptosporidium, the table or tables shall contain the average and range at which the contaminant was detected. The report may include a brief explanation of the reasons for monitoring for unregulated contaminants.

(8) All of the following information shall be included on Cryptosporidium, radon, and other contaminants:

(a) If the ~~supplier~~ **supply** has performed any monitoring for Cryptosporidium, including monitoring performed to satisfy the requirements of 40 C.F.R. §141.143, which indicates that Cryptosporidium may be present in the source water or the finished water, the report shall include both of the following:

(i) A summary of the results of the monitoring.

(ii) An explanation of the significance of the results.

(b) If the supply has performed any monitoring for radon which indicates that radon may be present in the finished water, then the report shall include both of the following:

(i) The results of the monitoring.

(ii) An explanation of the significance of the results.

(c) If the ~~supplier~~ **supply** has performed additional monitoring which indicates the presence of other contaminants in the finished water, then the ~~supplier~~ **supply** is encouraged to report any results that may indicate a health concern. To determine if results may indicate a health concern, the ~~supplier~~ **supply** may determine if EPA has proposed a national primary drinking water regulation or issued a health advisory for that contaminant by calling the safe drinking water hotline (800 426 4791). EPA considers detections above a proposed MCL or health advisory level to indicate possible health concerns. For such contaminants, the report may include both of the following:

(i) The results of the monitoring.

(ii) An explanation of the significance of the results noting the existence of a health advisory or a proposed regulation.

(d) Levels of sodium monitored under R 325.10717b~~(2)~~ during the year covered by the report.

(9) For compliance with state drinking water standards, in addition to the requirements of subrule (7)(f) of this rule, the report shall note any violation that occurred during the year covered by the report for all of the following requirements and include a clear and readily understandable explanation of the violation, any potential adverse health effects, and the steps the supply has taken to correct the violation:

(a) Monitoring and reporting of compliance data.

(b) For filtration and disinfection prescribed by R 325.10611, R 325.10611a, and R 325.10611b, supplier~~s~~ which have failed to install adequate filtration or disinfection equipment or processes, or have had a failure of such equipment or processes which constitutes a violation shall include the following language as part of the explanation of potential adverse health effects in the report: "Inadequately treated water may contain disease causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches."

(c) For lead and copper control requirements prescribed by R 325.10604f, supplier~~s~~ that fail to take one or more actions prescribed by R 325.10604f(1)(d), R 325.10604f(2), R 325.10604f(3), R 325.10604f(4), or R 325.10604f(5) shall include the applicable language of table 1 of R 325.10405 for lead, copper, or both, in the report.

(d) For treatment techniques for acrylamide and epichlorohydrin prescribed by R 325.10604e, supplier~~s~~ that violate the requirements of R 325.10604e shall include the relevant language from table 1 of R 325.10405 in the report.

(e) Recordkeeping of compliance data.

(f) Special monitoring requirements prescribed by R 325.10717b.

(g) Violation of the terms of a variance, an exemption, or an administrative or judicial order.

(10) For variances and exemptions, if a ~~system~~ **supply** is operating under the terms of a variance or an exemption issued under section 20 of the act, then the report shall contain all of the following information:

(a) An explanation of the reasons for the variance or exemption.

(b) The date on which the variance or exemption was issued.

(c) A brief status report on the steps the supply is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption.

(d) A notice of any opportunity for public input in the review, or renewal, of the variance or exemption.

(11) The report shall include all of the following additional information:

(a) A brief explanation regarding contaminants which may reasonably be expected to be found in drinking water including bottled water. The explanation may include the language of paragraph (i) through (iii) of this subdivision or supplier~~s~~ may use their own comparable language. The report also shall include the language of paragraph (iv) of this subdivision.

(i) The sources of drinking water, both tap water and bottled water, including rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

(ii) Contaminants that may be present in source water including all of the following:

(A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

(B) Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

(C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

(D) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

(E) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

(iii) To ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water supplies. FDA regulations establish limits for contaminants in bottled water that shall provide the same protection for public health.

(iv) Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the United States environmental protection agency's safe drinking water hotline (800 426 4791).

(b) The report shall include the telephone number of the owner, operator, or designee of the community water ~~system~~ **supply** as a source of additional information concerning the report.

(c) In communities that have more than 10% non English speaking residents, the report shall contain information in the appropriate language or languages regarding the importance of the report or the report shall contain a telephone number or address where residents may contact the ~~supplier~~ **supply** to obtain a translated copy of the report or assistance in the appropriate language.

(d) The report shall include information about opportunities for public participation in decisions by the supplie~~r~~s that may affect the quality of the water; for example, time and place of regularly scheduled board meetings.

(e) The ~~supplier~~ **supply** may include such additional information as it determines necessary for public education consistent with, and not detracting from, the purpose of the report.

(f) Groundwater supplies required to comply with groundwater provisions of R 325.10612 shall comply with all of the following:

(i) A groundwater supply that receives notice from the department of a significant deficiency or notice from a laboratory of a fecal indicator-positive groundwater source sample that is not invalidated by the department under R 325.10739(3) shall inform its customers of any significant deficiency that is uncorrected at the time of the next report or of any fecal indicator-positive groundwater source sample in the next report. The groundwater supply shall continue to inform the public annually until the department determines that particular significant deficiency is corrected or the fecal contamination in the groundwater source is addressed under R 325.10612a(1). Each report shall include all of the following elements:

(A) The nature of the particular significant deficiency or the source of the fecal contamination, if the source is known, and the date the significant deficiency was identified by the department or the dates of the fecal indicator-positive groundwater source samples.

(B) If the fecal contamination in the groundwater source has been addressed under R 325.10612a(1) and the date of the action.

(C) For each significant deficiency or fecal contamination in the groundwater source that has not been addressed under R 325.10612a(1), the department-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed.

(D) If the groundwater supply receives notice of a fecal indicator-positive groundwater source sample that is not invalidated by the department under R 325.10739(3), the potential health effects using the health effects language of Appendix A of subpart O.

(ii) If directed by the department, a groundwater supply with significant deficiencies that have been corrected before the next report is issued shall inform its customers of the significant deficiency, how the deficiency was corrected, and the date of correction under paragraph (i) of this subdivision.

R 325.10414 Annual consumer confidence reporting; required additional health information.

Rule 414. (1) All reports shall prominently display the following language: "Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people may seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800 426 4791)."

(2) A **community water** supply that detects arsenic at levels above 0.005 mg/l and up to and including 0.010 mg/l shall do either of the following:

(a) Include in its report a short informational statement about arsenic, using language, such as, "While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems."

(b) Write its own educational statement, but only in consultation with the department.

(3) A **community water** supply that detects nitrate at levels above 5 mg/l, but below the MCL shall do either of the following:

(a) Include a short informational statement about the impacts of nitrate on children using language, such as, "Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you are encouraged to ask advice from your health care provider."

(b) Write its own educational statement, but only in consultation with the department.

(4) ~~Supplies that detect lead above the action level in more than 5%, and up to and including 10%, of homes sampled shall do either of the following~~ **Both of the following provisions concerning lead specific information applies to every report**:

(a) **A community water supply shall include** ~~Include~~ a short informational statement about ~~the special impact of~~ lead **in drinking water and its effects** on children ~~using language, such as, "Infants and young children are typically more vulnerable to lead in drinking water than the general population~~. **The statement must include the following information: If present, elevated levels of lead can cause serious health problems,**

especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. [NAME OF UTILITY] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead. ~~It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline (800-426-4791)."~~

(b) **A community water supply may write** ~~Write~~ its own educational statement, but only in consultation with the department.

~~(5) Beginning in the report due by July 1, 2002 and ending January 22, 2006, a supplier of a community water system that detects arsenic above 0.010 mg/l and up to and including 0.05 mg/l shall include the arsenic health effects language prescribed by table 1 of R 325.10405.~~

R 325.10415 Annual consumer confidence reporting; report delivery; recordkeeping.

Rule 415. (1) Except as provided in subrule (7) of this rule, each ~~supplier of a~~ community water ~~system~~ **supply** shall mail or otherwise directly deliver 1 copy of the report to each customer.

(2) The ~~supplier~~ **supply** shall make a good faith effort to reach consumers who do not get water bills, using means recommended by the department. For the good faith effort to be adequate, the ~~supplier~~ **supply** shall tailor the effort to reach the consumers who are served by the supply but are not bill paying customers such as renters or workers. A good faith effort to reach consumers may include, but not be limited to, a mix of any of the following methods appropriate to the particular supply:

(a) Posting the report on the Internet.

(b) Mailing to postal patrons in metropolitan areas.

(c) Advertising the availability of the report in the news media.

(d) Publication in a local newspaper.

(e) Posting in public places such as cafeterias or lunch rooms of public buildings.

(f) Delivery of multiple copies for distribution by single biller customers such as apartment buildings or large private employers.

(g) Delivery to community organizations.

(3) Not later than the date the supply is required to distribute the report to its customers, each ~~supplier of a~~ community water ~~system shall mail~~ **supply shall deliver** a copy of the report to the department, followed within 3 months by a certification that the report has been distributed to customers, and that the information is correct and consistent with the compliance monitoring data previously submitted to the department.

(4) Not later than the date the ~~supplier~~ **supply** is required to distribute the report to its customers, each ~~supplier of a~~ community water ~~system~~ **supply** shall deliver the report to the local health department that has jurisdiction in the county in which the ~~system~~ **supply** is located. If the ~~system's~~ **supply's** service area is located in more than 1 county, then the report shall be delivered to all appropriate local health departments. In

addition, each ~~supplier of a~~ community water ~~system~~ **supply** shall deliver the report to any other agency or clearinghouse identified in writing by the department.

(5) Each ~~supplier of a~~ community water ~~system~~ **supply** shall make its report available to the public upon request.

(6) Each ~~supplier of a~~ community water ~~system~~ **supply** serving 100,000 or more persons shall post its current year's report to a publicly accessible site on the Internet.

(7) The governor or his or her designee, for the purposes of waiving the mailing requirement, may waive the requirement of subrule (1) of this rule for community water supplies serving fewer than 10,000 persons.

(a) Supplier~~s of systems~~ serving fewer than 10,000 persons that elect to use the waiver shall do all the following:

(i) Publish the report in 1 or more local newspapers serving the area in which the supply is located.

(ii) Inform the customers that the report will not be mailed, either in the newspapers in which the report is published or by other means approved by the department.

(iii) Make the report available to the public upon request.

(b) Supplier~~s of systems~~ serving 500 or fewer persons that elect to use the waiver may forego the requirements of subdivision (a) of this subrule if they provide notice at least once per year to their customers by mail, door to door delivery, or by posting in an appropriate location that the report is available upon request.

(8) A ~~supplier of a system~~ **supply** subject to R 325.10411 to R 325.10415 shall retain copies of its consumer confidence report for not less than 3 years.